

Manufacturers Record

Reg. U. S. Patent Office



SEPTEMBER 1933

25 CENTS A COPY

SALESMANSHIP NOW NEEDED

Our annual building expenditures in 1928 were \$6,500,000,000. They were only \$2,000,000,000 last year. It is estimated that 85 per cent of Americans are inadequately housed and more than half of the industrial equipment of the country is obsolete. The longer building and buying are deferred, that much longer will trade revival be retarded. Business can not pay the minimum wages now required of it and increase employment unless sales volume increases.

The wholesale price index has been rising for weeks; it is now more than 69.5 per cent of the 1926 base price for all commodities. This is a gain of more than 8 per cent since April. In the building materials field, the rise has been steady from 70.8 in the first part of May to more than 80 at the end of August. Since July 1st, the increase has been nearly 4 per cent. Compared with July, 1932, wholesale prices of all building materials have advanced 10 per cent. Included in this average are lumber, which has increased 19 per cent; cement 11 per cent; brick and tile 3 per cent; paint and paint materials 11 per cent; plumbing and heating 25 per cent from the low point, and other building materials more than 5 per cent. Hardware and many other building products are 50 per cent or more above their low point last year.

As the N. R. A. Program has passed through the initial stages of organization, and as it gets underway, it becomes increasingly evident that codes of business conduct, wage scales and curtailment of working time, must be met by increased sales. Much has been accomplished in recent weeks in reviving activity, but with the critical stage of the Recovery movement at hand, buying must increase, and as we see it, individual business must advertise to create demand for its own goods and services. Government has not become a salesman, although it has become a partner in operating management.

Business can help in the buying movement by rehabilitating worn equipment and facilities. Homes, stores and warehouses need renovation and improvements, as well as factories, power plants and transportation systems, but in the final analysis, the merchant or manufacturer must, through his own sales efforts, create demand for his product. Stocks will not move from the shelves unless the energy of salesmanship is applied. The greatest force in this direction is constructive advertising.

A Great Architectural Group

Office Building of 46 stories, Modern Hotel of 28 stories, two large Department Stores, sundry fine Specialty Shops, capacious 25-story Parking Garage

framed as a UNITY

THE splendid Carew Tower group in Cincinnati, covering a ground area approximately 200 feet by 400 feet, represents that most modern type of planning which concentrates varied facilities into one utilitarian center.

The Carew Tower, the Netherland Plaza Hotel and the Carew Parking Garage constitute the three principal units of this impressive group; each unit distinctive and complete in itself, yet contributing its measure to the esthetic proportion and architectural treatment of the whole.

Strength, rigidity and permanence are assured by the framework of structural steel, which was furnished and fabricated by the

AMERICAN BRIDGE COMPANY
FABRICATORS AND ERECTORS
OF STEEL STRUCTURES

CAREW TOWER CINCINNATI, OHIO

General Contractors
Starrett Bros., Inc.

Architect
Walter H. Ahlslager

Associate Architects
Delano & Aldrich

Steel Design by
Lieberman & Hein, Engineers



AMERICAN BRIDGE COMPANY

General Offices: Frick Building, Pittsburgh, Pa.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION



Contracting Offices: Baltimore, Boston, Chicago, Cincinnati, Cleveland, Denver, Detroit, Duluth, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Salt Lake City.

Pacific Coast Distributors: COLUMBIA STEEL COMPANY, San Francisco, Los Angeles, Portland, Seattle.
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A NEW SHOVEL FEATURE THAT GIVES THE CUSHION OF STEAM

THE Northwest Cushion Clutch is the most fundamental improvement in shovels in recent years. No matter how tightly this clutch is adjusted, it limits the hoist rope pull to a definite value with the following results:

- it transmits the full engine power, but reduces maximum stresses on every part under power when the hoist rope is tensioned.
- it reduces maximum loads on the drum shaft by 50%.
- it reduces drum clutch adjustments 3 to 5 times.
- it gives the operator from 3 to 5 times as long to throw out the clutch to prevent the engine stalling, when the dipper teeth hit an immovable rock, smoothing out jolts and jars.
- it lengthens the hoist rope life in rock digging.
- it permits a Northwest shovel to retain its great power and gives it the cushion of steam.

Here is another exclusive advantage that only Northwests can give you—another advantage to increase shovel output!

NORTHWEST ENGINEERING CO.

*The world's largest exclusive builders of
gasoline, oil burning and electric powered
shovels, cranes and draglines*

1733 Steger Bldg., 28 E. Jackson Blvd.
Chicago, Ill., U. S. A.

NEW CUSHION CLUTCH

*An
Exclusive
Northwest
Feature!*

REPRESENTATIVES

Atlanta, Ga.: 351 Whitehall Street,
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Memphis, Tenn.: Second at Butler,
P. O. Box 2057.

Dallas, Texas: 1221 S. Lamar St.

St. Louis, Mo.: 1325 Macklind Ave.

M.R. 9, Gray



NORTHWEST

VIRGINIA BRIDGE

Presents

TODAY'S AND TOMORROW'S—BRIDGES

An Epic in Six Pictures



Heavy traffic requires strong bridges, wide rivers, long spans. We want to get "across the river" quick, older methods are too slow. Also we want to be sure we can get across anytime and all the time.

As in the case of the skyscraper, steel and the steel engineer and builder have made possible our long-span bridges thereby keeping clear a wide channel in navigable waterways and also avoiding the hazards of deep water foundations.

More and more State highway departments have been enabled to connect up important routes with a safe dependable steel bridge, good for today and many tomorrows.

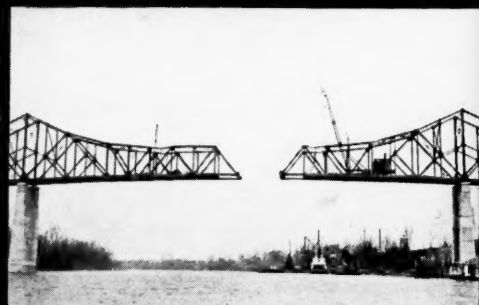
Our Company has had a considerable part in this, just as it has had in steel bridge and building construction generally throughout the South and West for nearly 40 years.



VIRGINIA BRIDGE & IRON CO.

Roanoke Birmingham Memphis Atlanta New Orleans
New York Los Angeles Charlotte Dallas El Paso

MANUFACTURERS RECORD FOR



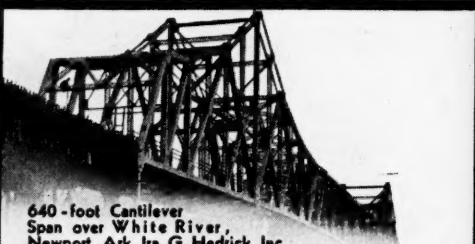
720-foot Cantilever Highway Span over White River, Clarendon, Ark., manufactured and erected by us. Ira G. Hedrick, Inc., Consulting Engineer, Austin Bridge Co., General Contractors.



766-foot continuous span over Tennessee River, Scottsboro, Ala. Kansas City Bridge Co., General Contractors.



766-foot continuous span and four 200-foot spans over the Tennessee River at Whitesburg, Ala. Hardaway Contracting Co., Gen'l Contr's. We manufactured and erected this steelwork, as well as the Scottsboro Bridge above.



640-foot Cantilever Span over White River, Newport, Ark. Ira G. Hedrick, Inc., Consulting Engineer, Missouri Valley Bridge & Iron Co., Gen'l Contr's. We furnished a duplicate of this span for White River Bridge at New Augusta, Ark.

TABLE OF CONTENTS

SEPTEMBER 1933

Vol. CII No. 9

EDITORIALS

| | |
|-------------------------------|------------|
| Salesmanship Now Needed | Cover Page |
| Broaden Banking Facilities | 11 |
| Government Operated Utilities | 12 |
| Wage Differential | 12 |
| Teamwork for the Long Pull | 13 |

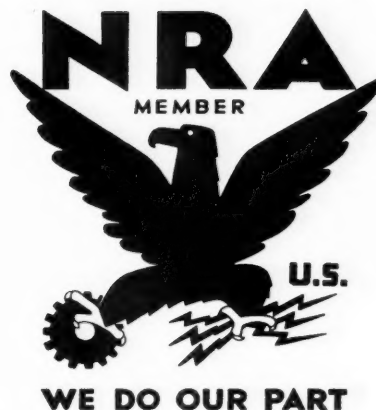
NEWS and FEATURE ARTICLES

| | | |
|---|----------------------------|----|
| John Law and the Mississippi Bubble | By L. F. Loree | 14 |
| The South—America's Horizon of the Future | By Russell C. Jones | 17 |
| Growth of Dairying in the South | By J. H. Kraft | 18 |
| A School That Is Not Only a School | By E. A. Sutherland, M. D. | 20 |
| \$29,351,000 Construction Awards in South for August Set New High Mark for 1933 | | 22 |
| Modernize Public Property as Public Work Program | | 40 |
| William D. Tynes | | 40 |
| Remove Barriers to Progress | By Carl R. Cunningham | 42 |
| The Naval Stores Industry | By Dr. A. Stuart Campbell | 44 |
| New Deal for Railroads | | 46 |
| Perfects Radio Transmission | | 46 |

SPECIAL DEPARTMENTS

| | |
|--------------------------------|----|
| Iron, Steel and Metal Market | 24 |
| Good Roads and Motor Transport | 26 |
| Equipment, New and Improved | 28 |
| Financial News | 30 |
| Items of Interest | 34 |
| Industrial News | 36 |
| Index for Buyers | 56 |
| Index of Advertisers | 58 |

SEPTEMBER NINETEEN THIRTY-THREE



MANUFACTURERS RECORD

Devoted to the Upbuilding of the Nation Through the Development of the South and Southwest as the Nation's Greatest Material Asset

Published Monthly

by the

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Subscribers are asked to notify us of change in address to avoid delay in service.



PUBLISHERS DAILY CONSTRUCTION BULLETIN AND BLUE BOOK OF SOUTHERN PROGRESS

Member, A.B.C.

What every Citizen should know*



A public water supply system, or improvements to an existing system, can now be constructed at the lowest cost to the community in history.

Under the provisions of the National Industrial Recovery Act, the Government

may make a direct grant to the community of thirty per cent of the cost of labor and materials. This is not to be repaid. The Government may lend the balance of the cost at a very low interest rate. This is to be amortized over a period of years. If your community is without a water supply system now is the time of times to build one.

If your present water supply system needs improvements, as most water supply sys-

tems do, construct them now and take advantage of an unprecedented economy to the community.

Such productive improvements are an ideal form of unemployment relief. They are not "made" work but permanent improvements necessary to the efficient operation of an indispensable public service owned by the citizens. They do not add to existing taxes since municipal water supply systems are self-supporting. The cost of the improvements can be paid for out of earnings instead of tax receipts.

You are a "citizen-stockholder" in your municipal water supply system. Make it your business to find out whether improvements are needed, and if so, what is being done to secure quickly for *your* community the benefits of the National Industrial Recovery Act.

For further information, address the National Recovery Committee for Water Works Construction of the American Water Works Association, 29 West 39th Street, New York, or The Cast Iron Pipe Research Association, Thomas F. Wolfe, Research Engineer, 309 Peoples Gas Building, Chicago, Illinois.

Water works improvements are an **INVESTMENT**, *not an expense*

*This advertisement is also addressed to the 400,000 readers of the July 31st issue of Time.

To the Home Makers of America

Sugar and the Home

Sugar is a household necessity; its cleanliness, purity and price are of daily concern to millions of homes. As refiners of the raw cane sugar of the Tropics, we and our predecessors have served the country for over 200 years. Our refineries and products are the best in the World. We have performed the refining service through the years at low cost. Before and during the World War, the United States cane refining industry proved to be the key of the sugar supply of the Nation.

Expanded capacity a legacy of our War effort

During the World War, the industry went under governmental control as a patriotic service, expanding its capacity to care for the Allied nations. No provision was made by our Government to hold, through trade agreements, the Allied nations' business after the War. Refiners, as individuals, were powerless to accomplish this end, so this left us with excess capacity more than enough for domestic need. Since the War nations have by tariffs, bounties and other devices closed their doors against American refined sugar, and by bounties on exports have displaced our refined sugar even in world markets. Our large excess capacity is thus a disastrous legacy from our war effort.

Deliberate duplication in the Tropics

Due to a loophole in the tariff the domestic industry has been further imperiled by a deliberate Duplication in the Tropics of refining facilities long established here. Our Tariff and Colonial Policy encouraged the production of *raw* sugar in the Islands and protected its *refining* on the Mainland. The tariff loophole reversed that—clearly a mistake and a costly one. The extent of this duplication is shown by the following table of *refined* sugar coming into continental United States since 1925.

| From | 1932 | 1931 | 1930 | 1929 | 1928 | 1927 | 1926 | 1925 |
|-------------|---------|---------|---------|---------|---------|---------|--------|--------|
| Cuba | 423,252 | 326,662 | 244,485 | 228,541 | 166,720 | 79,201 | 51,859 | 1,182 |
| Puerto Rico | 84,504 | 72,314 | 66,161 | 38,969 | 40,006 | 10,584 | 2,891 | 707 |
| Hawaii | 20,247 | 9,720 | 15,003 | 8,723 | 14,641 | 12,328 | 7,244 | 8,592 |
| Philippines | 52,794 | 32,009 | 25,197 | 8,396 | 7,103 | 1,836 | 4,000 | 2,647 |
| Foreign | 8,295 | 6,499 | 9,197 | 1,820 | 5,200 | 917 | 3,394 | 3,654 |
| Long Tons | 589,092 | 447,204 | 360,046 | 286,449 | 233,670 | 104,866 | 69,388 | 16,782 |

Tropical refineries hum. U. S. refineries work part time

The refined sugar brought in during 1932 was sufficient to supply 14,150,000 Americans, equivalent to the consumption of 21 states, and resulted in reduced meltings in United States, dismissal of employees, reduced wages, and decreased purchases of supplies.

Tropical refiners now seek to perpetuate their duplication of United States refineries by demanding an official share—or "quota"—in the United States market!

Naturally. But would it be fair to the domestic industry, their employees and stockholders, numbering tens of thousands? Would it be in the public interest? Would it square with American policy, old and new? The Philippines and Puerto Rico have been liberally treated and should be content to continue as producers of *raw* sugar, as originally intended. Would it be fair to give Cuba a "quota" on choco-

late and silk and other manufactured articles, or would it be fair to give Canada a "quota" on flour, or Holland on cheese? If so, what a stimulus for further unnecessary duplication of mainland facilities! If not, why should the sugar refining industry be subject to such official treatment?

No justification for Cuba to duplicate domestic refineries

In 1920 the Tariff Commission pointed out that Cuba did not *refine* sugar, and so the 20% preference on Cuban *raw* sugar afforded protection to American refiners. This theory failed when Cuba built refineries. Cuba knew full well our tariff principle of providing a higher duty on an imported manufactured article than on the raw material imported for its domestic manufacture. Cocoa beans are on the free list but chocolate pays 40% duty. Raw silk is free of duty but silk itself pays 65% duty. And so generally. Cuban duplicators of domestic sugar refineries well understood that they had no claim on the United States market or households.

Foreign countries generally safeguard their refining industry from duplication even in their own colonies

This is true of Canada, England, France, Italy, Holland, Sweden, Denmark, Japan, Australia and generally throughout the world. Refining in country of consumption is the approved practice. Such is the practice in Canada, England, France, Holland, Japan and other countries and always has been the practice in the United States. It has proven best for raw sugar producers everywhere. It has proven the best safeguard for the households rather than dependence on remote tropical refineries.

Why we are advertising these facts to the Home Makers of America

United States sugar refiners now have the capacity and can employ labor if the sugar now refined in Cuba was refined in the United States. We enter daily about 25,000,000 homes. Cleanliness, purity and prices are daily topics. If sugar prices are high the households look to us. If low, the sugar producers in the Tropics look to us. We stand between these two large groups, with a permanent relationship to both. Sugar refining and distribution, to be efficient in all respects, must be a large volume industry. In years of crop failure we search the world for supplies. In years of war we are vital to national defense. Anything which lessens our volume lessens our efficiency and increases our costs. The households of the country will be the first to feel the effect. From our contacts with the sugar producers of the Tropics we are satisfied that they agree with us that the two-hundred-year system of producing raw sugar in the sugar islands and refining it in the United States, where it is consumed, should not be disrupted.

Decision at Washington will affect Homes of the Nation

We are advertising these facts so that the home makers of the country may know that our Federal Government at Washington, under the cloak of its Recovery Program, has been asked by a small minority group of producers of the Philippines, Puerto Rico and Cuba to make a decision against the interest of our people in the United States.

THE AMERICAN SUGAR REFINING COMPANY

By Earl D. Babst, *Chairman*
At Boston, Brooklyn, Baltimore,
New Orleans

ARBuckle BROTHERS

By Martin E. Goetzinger
At Brooklyn

CALIFORNIA & HAWAIIAN SUGAR REFINING CORPORATION, LTD.

By Frank E. Sullivan, *President*
At San Francisco

THE FRANKLIN SUGAR REFINING COMPANY

By Ralph S. Stubbs, *President*
At Philadelphia

GODCHAUX SUGARS, INC.

By Charles Godchaux, *President*
At New Orleans

HENDERSON SUGAR REFINERY

By William Henderson
At New Orleans

IMPERIAL SUGAR COMPANY

By I. H. Kempner, *President*
At Sugar Land, Texas

W. J. McCAHAN SUGAR REFINING & MOLASSES COMPANY

By Manuel E. Rienda, *President*
At Philadelphia

THE NATIONAL SUGAR REFINING COMPANY OF NEW JERSEY

By James H. Post, *President*
At Brooklyn, Yonkers, N. Y.;
Edgewater, N. J.

PENNSYLVANIA SUGAR COMPANY

By John A. McCarthy, *President*
At Philadelphia

REVERE SUGAR REFINERY

By Henry E. Worcester, *Vice-President*
At Boston

SAVANNAH SUGAR REFINING CORPORATION

By Benjamin O. Sprague, *President*
At Savannah

WESTERN SUGAR REFINERY

By Frank J. Belcher, Jr., *President*
At San Francisco

The SOUTH PREFERS INTERNATIONALS



THE South has pride of Past and a great will to build a greater Future. From Tidewater Virginia southward to the Gulf and southwestward to the Mississippi and beyond, the record of the South is best told as a blend of glamour and achievement. Its story is made against a background of quality and distinction.

Peopled with the descendants of the pioneers, alert with modern ambition, the states of the South are going forward with a new national deal that has recognized their especial potentialities. Great resources are at their command. Industry, commerce, and agriculture, a noble history and a strategic setting in key with the times, all are working together to build a land of new fortune in Dixie. The South takes its place in the present

march of the nation to prosperity.

International Trucks, made by a corporation whose antecedents go back over a century to Virginia and the year 1831, stand high in the esteem of the South. Tens of thousands of Internationals haul an incalculable tonnage over southern highways.

Below the Mason and Dixon Line International Harvester maintains Company-owned service at 57 points — the largest Company-owned truck service organization in the South. The American Bakeries Company, the Dr. Pepper Company and Dr. Pepper Bottlers, and the Atlantic Ice and Coal Company are representative institutions whose activities cover the South. Each of these companies uses hundreds of trucks, and each one, from officers to drivers, is outspoken in its praise of

DR. PEPPER COMPANY

drink a bite to eat  at 10, 2 and 4 o'clock
GENERAL OFFICES, 402 JEFFERSON AVE.
DALLAS, TEXAS

December 2, 1932

International Harvester Company,
Dallas, Texas.

Gentlemen:

We purchased our first International trucks in 1927. Since that time we have been replacing our heavy-duty trucks with Internationals.

Your dependable service and our own cost records were the determining factors in our turning to International trucks. Delivery cost per case of Dr. Pepper is now the lowest in our history.

Many of our International trucks have run over 100,000 miles without replacements of engine parts.

Yours very truly,
DR. PEPPER COMPANY

International Trucks and Service.

We recommend Internationals to you on the basis of the complete satisfaction they are rendering a legion of owners *everywhere*. International sizes range from ½-ton to 7½-ton. Chassis prices \$360 up, f.o.b. factory. Ask any International branch or dealer for a demonstration.

INTERNATIONAL HARVESTER COMPANY
606 S. Michigan Ave. OF AMERICA Chicago, Ill.
(INCORPORATED)

INTERNATIONAL TRUCKS

"PLYMOUTH EXCEEDS OUR EXPECTATIONS"

SOUTHPORT MILL, LTD.
NEW ORLEANS, U. S. A.

June 6, 1933.

The Fate-Root-Heath Co.,
Plymouth, Ohio.

Gentlemen:

We are pleased to advise that the fourteen ton, standard gauge, Plymouth Gasoline Locomotive, which you sold us in October, 1929, has given us excellent service, without any interruption or breakdowns.

Our conditions are very severe, in that we haul heavily loaded tank cars around our plant tracks, in which there are some exceptionally sharp curves.

We formerly used a sixty tons steam locomotive, which was extremely hard on the track, cost far more to operate, and was continually needing repairs, whereas the upkeep on the gasoline locomotive has been extremely low, and our cost of operation has been greatly reduced.

We do not hesitate recommending this locomotive highly. It has exceeded our expectations.

Yours very truly,
SOUTHPORT MILL, LTD.

J. A. Arbour
Ass't. Secretary.

It will do you good to read the letter reproduced here. Mr. J. A. Arbour, Jr., Ass't Secretary of Southport Mills, Ltd., New Orleans, tells of their success with their Plymouth and how it has greatly reduced their operating and maintenance costs.

But Mr. Arbour's letter is not an unusual one. Plymouth users practically always experience savings in haulage costs, some of them sufficient to pay for their equipment in one or two years' time. Send for free descriptive bulletins and prices.

**PLYMOUTH
LOCOMOTIVE
WORKS**

The Fate-Root-Heath
Company
**PLYMOUTH
OHIO**



PLYMOUTH

Gasoline and Diesel Locomotives

SEPTEMBER NINETEEN THIRTY-THREE

Fitted Exactly to YOUR Requirements *No Matter What They Are!*

GMC HEAVY DUTY TRUCKS



The GMC heavy duty line can provide *any* type of equipment—*exactly fitted to your particular needs*. No other line of commercial vehicles is so extensive or complete.

Eleven basic models cover the 5 to 15 ton range. GMC trailer equipment gives capacities to 22 tons. Six heavy duty engines are *regularly* available—uniform-design, 6-cylinder, valve-in-head, all of them! Forty-four distinct chassis . . . 14 rear axles . . . 7 transmissions—are *standard, available* selections for heavy duty use!

And, mark you—every GMC heavy duty truck is a regular production job! *From*

bumper to tail lamp—every one is truck-built by GMC!

This is the industry's most comprehensive line of heavy duty trucks and trailers. It is matched, and rounded to completion, by a truck-built line of light and medium duty vehicles from 1½ to 4½ tons capacity.

Fitting commercial equipment *to your particular needs* can be done, with *scientific exactitude*, only with GMCs! The GMC representative is equipped to determine precisely the heavy duty truck that will do your job best . . . and most economically. Write or wire for further details—*today*.

GENERAL MOTORS TRUCKS and Trailers

GENERAL MOTORS TRUCK COMPANY

Time Payments Available Through Our Own Y. M. A. C.

PONTIAC, MICHIGAN

• Manufacturers Record •

BROADEN BANKING FACILITIES

INFLATIONISTS are urging that the Government issue \$3,000,000,000 of new currency to take up that amount in outstanding Government bonds, or expend it for public works. Why not first find a way to free more than \$2,000,000,000 of depositors' money tied up in closed or restricted banks? This amount put at the immediate disposal of depositors will stimulate business in many handicapped communities and meet many individual problems. It would be far better to do this than to plunge into the dangers of direct inflation.

Walter J. Cummings, Assistant Secretary of the Treasury in charge of closed banks, reported as of August 12 that 13,951 licensed banks with deposits of \$31,737,000,000 are operating without restrictions and 2,870 banks with deposits of \$2,163,000,000 are closed or on a restricted basis. On the face of this showing that at least 93 per cent of the bank deposits of the country are at the disposal of depositors, the remainder under restriction would seem to be negligible. The situation, however, is more serious. In addition to the frozen deposits in banks still closed, there are hundreds of millions of deposits which cannot be freely used because in the reorganization of many banks after March 4, or opening of new banks, depositors were required to subscribe to "beneficial" certificates or bank stock or both. So while it is true that 13,951 banks are open on an "unrestricted" basis, it is by no means true that the deposits in all of the banks in this group at the time of closing are now available 100 per cent. One estimate is that nearly 20 per cent of deposits or more than \$7,000,000,000 are tied up.

Doubtless these frozen deposits in whole or in part of more than 6,000,000 people in many communities scattered throughout the country have been a retardant to the Recovery movement because their buying power has been curtailed for lack of available cash to make purchases or pay off loans.

In some respects the Government's handling of the closed bank difficulty has not been as helpful to an early settlement as conditions seemed to warrant.

Practically all banks could have reopened if the Government had not insisted, as Senator Vandenberg recently pointed out, upon "liquidity instead of solvency." At this stage of the Recovery movement no branch of business can be of greater service than the banks. Bank liquidity is essential but this is a time when an increase of credit will assist legitimate business.

In this connection, a well-known Southern distributor, commenting on the "grave weakness" in the N.R.A. program as pointed out in the August issue of the MANUFACTURERS RECORD that, "present credit conditions are not such as to encourage the belief that money is available for deserving industrial and business concerns," writes:

"I do want to emphasize what you probably know to be true, and not confined to any particular section, or industry, and that is—the commercial banks are not only declining to extend any credit, but are still requiring curtailments, until industry generally is without means or credit to carry on the N.R.A. program, calling for increased payrolls and to take care of the increased volume of business that is offered them.

"The picture is this. We could put our hands on firm after firm scattered over the country which has a good plant, probably with fixed assets representing two for one against their liabilities, but with absolutely no liquid capital, this having been exhausted in the three-year struggle to hold things together, and to carry their men. These firms not only have this investment in plants, but many of them are backed by a business experience, with an established name and reputation in the trade. Business is offered them; they are taking part of it. Every penny they can get, that is not required by their bank on curtailment, is used for payrolls. The result is that the first producer, or distributor, is compelled to carry the account for 60 or 90 days, or even longer, until this raw material is finished, sold and returns obtained. In turn this distributor, or shipper, is again without credit. He could, and does, obtain their trade acceptances, or notes, from the same manufacturers, or dealers, and here again the banks decline to use, or discount, these notes or trade acceptances.

"We, as distributors, must pay cash for our goods, it being largely a matter of freight and labor. What is true of us, we believe, is true generally. The lack of credit statements the whole program of manufacturing and distribution."

This emphasis on the need for relief from restricted credit facilities is a vital point in the progress of all business and one which cannot fail to be of immediate pressing interest to banks who wish to do their part in promoting general welfare. In the urge to buy and improve plant facilities and build there must be credit extended when the borrower is worthy.

GOVERNMENT OPERATED UTILITIES

THE Florence, Ala., Times referring to a Birmingham Municipal Election to be held in October says:

"Considering the entire question of public and private distribution of power in its true light, it is surprising that the power companies have been able to hold out as long as they have. Ten years from now the entire Tennessee Valley with which the Authority is charged with developing will be one network of Government power lines."

Does this present an alluring prospect of an Utopian condition or rather does it give pause to thoughtful minds, raised perhaps in the old tradition, but nevertheless regardful of individual property rights and the accomplishments of pioneers who have done more for development, while taking individual risks, than any Government ever could or ever would.

We are being hurried along a strange road and some of us of an older school are not quite ready to throw aside everything that has developed industries, populated the waste places and brought well-being into isolated communities, in favor of a dream of Government benevolence which is to handle the affairs of citizens and under which, as is being done under pressure of today's confusion, everything is left to Government.

This doesn't mean that water should not be taken out of overloaded securities where that condition exists, but due regard should be given to enhanced values that have been created in many cases by earnings that have been put back into property improvement. Even where this has not been done to the extent that it might have been done, and we believe these instances are rare, the interests of tens of thousands of investors having to be considered, it will be admitted that time must be allowed to accomplish any such movement. Certainly it does not mean that the inherent worth of the property of these investors shall be thrown aside without regard to their rights; without regard to the actual development work which their money has made possible, in favor of an untried scheme on the part of Government. Does the Times, or anybody else, imagine that under our political set-up it is possible to work any such plan of Government ownership without graft and waste and inefficiency? When has this been done? What example have we to point to which will encourage us to believe with all the care possible in spending untold millions to render a supposed public service, we will not have as the accompaniment an army of jobholders and a load of taxes added to the present burden that is fast approaching an unbearable sum?

There is talk all over the South and throughout the country about municipally-owned utilities. Before plunging too far, and with full recognition of the mistakes that have been made by utilities that have had rare privileges, it is well to take account of what has been the history of Government-owned projects, and what is the guarantee that the future will produce any different record from that of the past imperfections.

It is true we are in a New Deal. It is true that the inclination in many quarters is to turn to Government for almost everything down to the right to live; but before we go the whole way, it is not out of place to think of what this country has done under individual initiative and enterprise and consider how we can bring back an inducement for individual capital and individual work to engage in the things that the country still needs. If the Government is to do it all, it will be a sad day for America.

The farmer is to get fertilizer at Government cost. Why isn't everybody to get shoes on the same basis? Or clothes? Or other necessities? Are the products of our labor to be turned over to Government for redistribution as in Russia?

WAGE DIFFERENTIAL

WHILE the MANUFACTURERS RECORD has always advocated the highest wages consistent with sound business management, it has not been unmindful of the fact that the lower wage scale prevailing in the South has been justified by the lower cost of living due principally to the mild climate in which housing construction is less expensive, heating less costly and less winter clothing is required. Abnormally cheap labor, however, can be a liability by reducing purchasing power to a minimum.

Under the various codes that have been approved, we have pointed out that the minimum wage differential allowed the South is smaller than has existed in the past. In some cases the difference is practically negligible and to that extent has elements of grave danger for a continuation of Southern industrial development.

Also, there arises many questions as to the effect of an arbitrary minimum wage rate on a section of country where an excess of farm labor and negro labor has furnished an inexhaustible supply of common labor. In more or less degree, other sections of the country are faced with the same problem of an over-supply of foreign labor.

No wage differential has been allowed as between racial labor groups. The only basis for a differential that has been recognized is that of a lower cost of living. Later on it may be possible to secure some adjustment on the minimum industrial wage in the isolated sections and strictly agricultural districts, although it is evident that the Administration is determined to raise the wage scale and the purchasing power of common labor. It does seem that in many parts of the South the increases so far approved are out of proportion to the cost of living on which the minimum wages are supposed to be based.

If Southern industries can meet competition under existing higher labor rates, the South will benefit from the increased purchasing power of its wage earners and Southern labor will have a greater advantage in buying power over Northern labor.

TEAMWORK FOR THE LONG PULL

TO numbers of conservative business men anxious to cooperate in the Recovery movement, the rapidity with which this nation is moving along untried economic paths is causing grave concern. They are perturbed by the newer developments resulting from unequal advances in commodity prices and costs of doing business. In the past few weeks farm prices, for example, have lost some of their earlier gains and farmers are faced with a rising cost of the things they buy. The Agricultural Adjustment Administration and the National Recovery Administration programs, and all other efforts to force business revival through regulation, from the conservative business viewpoint present alarming features that cast further suspicion on every move of an artificial character which heretofore has been considered contrary to fundamental economic laws.

Were it not for the fact that the whole spirit of the people has been raised since the dark days of March and confidence had begun to return to the point where some semblance of initiative was stirred which has resulted in greater activity and an increase in prices of commodities and securities, there would be greater uneasiness that the effort to bring about recovery through legislation would be futile. However, the cessation of rising activity because consumer buying has not developed is disturbing.

No one can deny that the country is at present on a higher rung of the revival ladder than it was in the early part of the year and above midsummer of last year, but it will be impossible for business to keep on paying the increased minimum wages unless there is an increase in buying. The lag is too great now for safety and the next few months will be most critical for the country.

No one can be absolutely sure that the plan of legislating (the broadest and most drastic of restrictive or prohibitive legislation) our way out of our economic difficulties is the right way. We cannot change human nature by law, abolish the law of supply and demand, or control the weather.

Control of production within sound limits is possible. Without a doubt, had not some 10,000,000 acres of cotton been plowed up this season, a 25 per cent reduction, the South would have been smothered in cotton because of favorable growing weather. Instead of a probable 17,000,000 bale crop, the forecasted 12,000,000 bale crop this year under the acreage reduction plan will not increase the present carry-over of about 8,000,000 bales. Were it not for the Government's effort to control production the price would be the lowest in history. On the other hand, unfavorable weather in the wheat sections helped to save prices for the wheat grower, for acreage curtailment is not to start until the new crop season. As it is, there are 385,000,000 bushels of surplus wheat to be considered. With reduced wheat acreage next year and further

curtailment of cotton in 1934 and 1935 there is some likelihood that through Government regulation we can hope to keep supply more in line with demand in these two principal cash crops.

We know, however, that all attempts in the past to artificially regulate production, prices and trade have failed sooner or later. Naturally many people are doubtful as they compare the regulatory movements of the present with the history of such efforts. But sponsors of the present Recovery movement say the new set-up of the plan now followed permits of no such comparison. It is a coordinated movement in all lines by the Government and business. The very magnitude and complexity of the movement involves so many factors that at this stage to attempt to analyze it or to anticipate its effects is to run into a maze of conflicting facts. As General Johnson, N.R.A. Administrator, says: "Never in the history of the world was a people's destiny more suddenly and completely placed in their own hands. What we need in this cause is justice and common sense, patience, a sincere and long-suffering effort to understand the other fellow's troubles and problems."

Business men in accepting the fact of Government regulation, wage adjustments and shorter working hours as necessary at least as an emergency recovery measure, are beginning to recognize and prepare for their continuation for the nation has embarked on a new road. With it goes a greater power for good or the reverse than was ever dreamed of before in our affairs.

Emphasis has been given to the fact that although differences of interest among the various groups in our economic order will always exist, the fundamental interests of all are mutual. No one group can advance at the expense of another. Capital cannot advance for long at the expense of labor nor labor at the expense of capital. Through the medium of business or government, or both, legitimate business must be protected against the inroads of those who are barriers to continued progress. It is not enough that business can be conducted honestly and under honest regulation; it must be conducted efficiently. It must be allowed to earn a fair profit for without profit it cannot pay wages large or small. It must be protected against the schemers, chiselers and racketeers—capital or labor—that undermine honest management and efficient operation.

Human nature has not changed; it cannot be changed by legislation, but with the great majority of the people willing to wholeheartedly support sincere efforts to work out of the hole into which the business of the nation had become mired, unitedly we can do what has seemed impossible. Advancement is made by striving forward and tackling each problem in turn. We have broken the deadlock of last March and there is reason to hope we will remove or pass around other obstacles that seemed insurmountable some months ago.

At this critical stage of the Recovery movement it is time for all to pull together—teamwork of Government, business and labor for the long pull is not only necessary but vital to national safety and welfare.

JOHN LAW AND THE MISSISSIPPI BUBBLE

By

L. F. Loree

WHEN the Ship of State, with trade wings beginning to swell its sails after the long calm of depression, has the helm swung from its traditional monetary course towards the shoals of inflation in anticipation of a speedier voyage to the Happy Isles of Prosperity, the question, "Whither are we drifting?" should give every thoughtful American pause.

If ever there be a time for the honesty of the laboratory method it is now when the warped fancies of those who conjure up panaceas for a nation's ills strive to permeate the thought of our people with their shibboleth, "Inflation," and to dominate the policy of government.

Is it not the truth that inflation, in its simplest terms, is a device to "soak the rich," to confiscate the property of the well-to-do and give it to the poor? But in the last analysis, it does not soak the rich alone; it soaks the poor as well, since it hurts all who cannot avoid its baneful influence and the poor, least of all, can do so. Inflation is an arbitrary and destructive interference with a recovery already well begun. There are no grounds for believing inflation can end a depression; extensive inflation, in every instance where exercised, has resulted in national misery.

Debasing Currency

A rapid review anent the debasing of the currency will show: During March the dollar virtually was at gold parity. The suspension of gold payments was viewed at home and abroad as a temporary emergency measure, but in April the gold embargo was made continuous. Then came the Inflation Bill and the "scrap of paper" definition of the gold clause in Government bond contracts. The dollar depreciated rapidly and the flight of capital was precipitate. On July 19, 1933, the dollar touched a low point in foreign markets. From that

date, when the depreciation was 31% per cent, the recovery has been slight; on July 27th the depreciation was 26 1/8 per cent.

The collapse of the French franc in 1925 and 1926 and the complete wreck of the German currency suggest alarming analogies, but these appear to have been relegated to the limbo of forgotten things.

Sound Money Policy

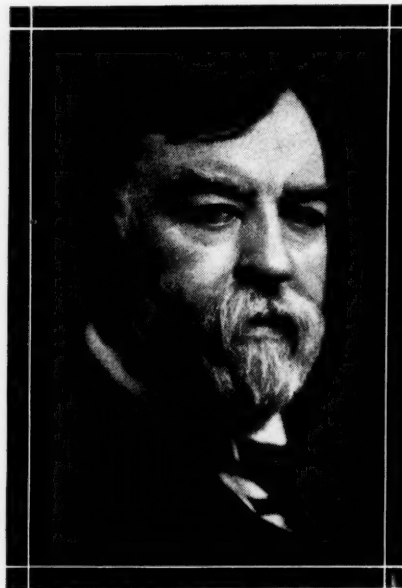
Orthodox economists believe that if the sound money policy of the Cleveland-McKinley era had been pursued this year, combined with moderate Government relief measures, we now should be witnessing home capital inspired with new enterprise and the return of home capital from abroad, the recent flight aggregating at least two billions of dollars.

There is yet time for such a consummation, but the path to it is not rash experimenting with our monetary standard. The London Economist, liberal financial weekly, under the ominous title "Sowing the Wind," says:

"The President has instituted enormous extraordinary expenditures which are to be met by borrowing. The dollar has not so much been allowed to fall after a heroic struggle to maintain its value as encouraged and egged on to depreciate. The printing of

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paper money, the familiar symbol of government insolvency, has not been rigidly forsworn, but held over the markets as an ultimate threat. In these ways the wind has been sown. There is every prospect that the crop will be of the familiar Biblical character."

Basis of All Inflation Theories

The United States now stands at the parting of the ways—we must take the highway of national honor with solid monetary milestones or traverse the road to national financial suicide cluttered with the debris of inflationary shams. As we pause, like a wraith from the past rises the shade of John Law, arch-inflationist, with the memory of his Mississippi Bubble that, like a rocket, burst in the air. The story of Law with his 200 days is particularly applicable to this our day and time. He expected gold and silver to maintain a value above the commercial price. When under Gresham's law it did not, Law decided to dispense with it altogether and replace it with paper. This is still the basis of all inflationist theories. The moral of his career is crystal clear to all who have eyes to see.

It may be held that Law miscalculated an equation in the inflationary formula which our present day wizards may avoid and thus escape the pitfalls that bring woe to a great people. There is no experience in the past to indicate it. During the French Revolution, as a consequence of inflation, the gold louis d'or of 24 livres, which on January 1, 1793, exchanged for 44 livres, had an exchange value by June 3, 1796, of 17.950 livres. In the war between the States, the Federal paper dollar was worth in gold but 35 cents on July 16, 1864, and we were not again on a gold basis until January 1, 1879. In Germany, when the mark was stabilized in 1924, one new Reichmark, with the same gold content and fineness, was exchanged by the government for one billion paper marks, a ratio approximately of 25 cents for \$250,000,000. History has many such examples.

Who Was John Law?

John Law was born in Edinburgh, Scotland, in 1671. He came of a wealthy family of bankers and goldsmiths, and from them inherited a large fortune. He went to London, inheriting an estate at Lauriston and occupied his time as a gambler. During the residence there he lost at cards his estate at Lauriston and half his inheritance. While in London he interested himself in the problems

Sound Money or Debased Currency

The United States Is Now at the Parting of the Ways — One Leads to National Honor With Solid Monetary Milestones; the Other Is the Road to National Financial Suicide Cluttered With the Debris of Inflationary Shams. As We Pause, Like a Wraith From the Past Rises the Shade of John Law, Arch-Inflationist, With the Memory of His Mississippi Bubble That Burst in the Air.

of banking and was of assistance to William Paterson, who was then organizing the Bank of England, making several suggestions that are said to be still in the practice of that ancient institution. At 23 years of age he fought a duel, for which he was tried and a death sentence imposed, followed by a pardon from the King. He went to Scotland and was forced out of that country after the union with England, escaping to Holland, where he remained until 1697, gambling and dissipating but carefully observing banking practice. He went to Italy, staying there until 1700, where to gambling he added the study of financial methods and principles. He returned to Scotland, promoting a plan to improve trade which, being rejected in 1705, he went to England and, again failing, went to Belgium, where he remained until 1708. He then went to Paris where, his plan again failing, he was in 1708 ordered by the Chief of Police to leave that city in twenty-four hours.

He spent the next seven years as a gambler in Venice, Genoa, Florence, Turin, Brunswick, Leipzig, Weimar and Vienna. Whether from skill, or luck, or a combination of the two, he was fairly successful in this occupation, adding materially to his capital and continuing his study of banking.

On the death of Louis XIV on September 1, 1715, the successor to the throne was his great grandson, crowned as Louis XV, who, being a minor, the actual government was carried on in his name by a Prince Regent until February 15, 1723.

Law, who enjoyed the confidence of the Prince Regent, was active in French financial affairs from March, 1716, to December 12, 1720, when he fled from Paris for his estate at Guermonde, and a few days later to Belgium. From thence forward he lived by gambling and upon a quasi-pension given him by Sir Robert Walpole, first Earl of Oxford, dying, impoverished, in Venice on March 21, 1729, aged 58.

France Adopts Law's Banking Scheme

It is this second period of Law's adventures in Paris that interests us. The various authors who have dealt with it give the following explanations:

The whole of France had been bled white by the wars of Louis XIV and by his mania for building palaces, and had a load of debt of 700,000,000 livres (about \$136,500,000). Currency became ever more debased and the depreciation amounted to 30 per cent. This debt Law increased in four years by 3,070,000,000 livres, about \$585,000,000.

The Government of France had been living upon loans. Taking advantage of the surprising credulity of the public it had drawn in the people's money in exchange for worthless paper-money which went by different names in order the more to deceive.

Upon Law's recommendation it was agreed, in 1716, to adopt his plan for a bank. He proposed to institute, entirely in his own name, a General Bank, and, as payment for a share, to demand only one quarter in specie and the remainder in State notes. By this method he proposed to make up the deficiency of a very bad paper currency and relieve the Minister of Finance of a portion of it.

The General Bank was finally approved May 2, 1716. Law, having become a French subject, the bank received its letters patent, or charter, on May 20, 1717. The Prince Regent honored the bank by taking the title of protector.

The "Banque Generale," with a 20-year franchise, was started with a capital of 6,000,000 livres, represented by 1200 shares of 5000 livres each, payable in four installments. Each five shares was entitled to one vote.

The Bank was a private bank of both deposit and account. It undertook never to borrow on interest and never to trade on its holdings. It also undertook the care of individual accounts, both receiving and paying out money for them. The first notes issued were on white paper and had printed on their back "the bank promises to pay to the bearer, at sight, the sum of 1000 ecus in specie of the present weight and standard"—(i. e., fineness). (There would seem to be nothing novel in the similar obli-

gation undertaken by our own Government.)

Law and his brother William, a London banker, were in possession of a majority of the votes. Business relations abroad were renewed and it was not long before confidence was restored. The rate of exchange turned in favor of France. The rate of interest was reduced from 30 per cent to six per cent. On April 10, 1717, to overcome the side-stepping of the tax collectors, it was decreed that the notes of the banks should be received in payment of taxes.

Law offered credit for undertakings in the interests of the public, encouraged useful works, was eager to help any honest bankrupt, gave advice to merchants, and worked in all directions with an energy which had been dormant a long time.

Launching the Mississippi Company

In July, 1717, he had his plans approved for the Compagnie d'Occident, usually spoken of as the "Mississippi Company." The company followed the lines of the Dutch East India Company, founded in 1602, the first of its kind and the model for others in Europe. Thus the man whom great States and insignificant princes had alike sent out of their lands, became a powerful merchant king who owed faith and homage only to the King of France.

The capital of the Compagnie d'Occident, founded in September, 1717, was 100,000,000 livres, in shares of 500 livres each, payable in State notes. For the first time, holdings, which Law called "made to bearer," were offered to the citizens of France.

On December 20, 1717, the Banque Generale declared a dividend of 7½ per cent for the first six months' operation.

On September 4, 1718, the right of tax-farming in tobacco was granted to the Compagnie d'Occident for 20 years in consideration of an annual payment of 12,000 livres.

Gold Restrictions

Late in 1718 Philip, King of Spain, was making preparations to march into France. The treasury was empty, so on January 1, 1719, the Banque Generale became the Banque Royal, as Law had originally suggested. Transportation of gold was prohibited, copper coin might not be received for sums over six livres or silver for over 600 livres. Law said to the Regent: "People must be compelled to accept paper money."

In May, 1719, the edict appeared incorporating the Compagnie des Indes Occidentales and the Compagnie de Chine with the Compagnie d'Occident

under the name of the Compagnie des Indes (an early consolidation).

Urged State Control of Trade and Finance

Law said that "all trade and all financial matters should be under one single control, that of the State. When we have arrived at that point, and I shall do my utmost to attain it, we will have the Golden Age on Earth."

In 1719 the Compagnie des Indes absorbed the Compagnie d'Afrique, increasing its capital by means of 500,000 new shares, which were offered to the public at a premium of 50 livres, in monthly payments extended over 19 months. (An early example of installment buying.)

Wild Inflation Starts

On July 20, 1719, Law was made Superintendent of Finance of the French Government.

On August 27, 1719, the right to farm the revenue was granted to the Compagnie des Indes, Law paying 52,000,000 in place of the 48,000,000 previously paid by the Paris brothers. Law now had the administration of the tobacco revenues, the mint, the public finances, the bank, the sea trade, and Louisiana. He was almost at the height of his power. On September 22, 1719, he decreed that the bank would thereafter refuse metal and receive only securities and notes.

By October, 1719, it was no longer a rush; it was a battle. The approaches of the Hotel de Nevers were so crowded by coaches and people that any one venturing to go there risked his life. It was possible to sell, buy back and resell and go on growing richer all the time. For the time being every one was a stock broker, from the Lord Treasurer of France down to the watchman in the cellar of a shabby tavern. Money changers, abbots, tavern-waiters, footmen, all had made immense fortunes. Luxury was making its way into every class. Nobody was willing to live simply any longer.

Law was, in fact, working at a furious rate remodelling everything in the kingdom. He was concerned with matters of trade and agriculture. He had in mind the idea of depriving the clergy of their uncultivated lands and giving them to the peasants. He wanted asylums for the poor built in all parts of the country. He encouraged fisheries, and helped manufactures with substantial loans. He took an interest in large undertakings and furnished funds for building bridges and canals. He wanted to have barracks built in the provinces in order to spare the inhabitants from having to house the troops. He was taking steps toward making Paris a seaport.

He was on the point of abolishing tolls throughout the country to make grains free. He was reducing import duties on oil, leather, tallow and wines. He removed the tax on playing cards—he owed so much to them! He abolished the officials connected with ports, harbors and markets of all kinds in Paris and this lowered by as much as 40 per cent the price of wood, coal, hay, bread, game, poultry, butter, eggs and cheese. He did all this because he wished to oppose the high cost of living and make himself popular. He never seemed to suspect that the high prices were brought about by the enormous sums of notes he had issued. (An early example of inflation.)

Enter the "Realizer"

In November, 1719, Law saw a sly enemy come into shape, and it was an enemy that would bear watching. It was the "realizer." Some began to see that "the total wealth of the East and the West would not be enough to pay the value of the paper at its present price." They accordingly sold out their shares, bought diamonds and exchanged their paper for gold. Others followed their example and acquired real estate. As they did so they withdrew from the market.

For the purpose of keeping intact the reserve of gold, Law was obliged to make constant attacks upon metal coinage. He brought out a decree that bank money should henceforth cost five per cent above the price of ordinary currency.

At the beginning of 1720 Law was made Controller General of Finance.

Gold and Silver Embargo

From May, 1719, to January, 1720, a period generally known as "Law's 200 days," shares had risen in market price from 500 livres to 18,000 livres. In January and February, 1720, the withdrawal of gold and silver continued. He forbade goldsmiths to make, sell or display any object made of gold or silver, and forbade anyone to wear diamonds, pearls or other precious stones. He prohibited the removal of specie from the kingdom and obtained a right of search in private houses and religious communities and confiscated any gold or silver held in excess of 500 livres. (An example we have followed in forcing our privately held gold into the Federal Reserve Banks.)

In March, 1720, the Regent, being anxious to maintain the fixed price of notes, angered Law, who said "the value of every single thing varies according to the variation of the quantity available of such things or to the demand for them or their usefulness." (An early definition of the law of supply and demand.)

The Inflation Bubble Bursts

On March 11, 1720, a decree was issued: "After the first of May, louis d'or were to be no longer in circulation; silver coins, with the exception of the twenty-sous piece, would be withdrawn from the 31st of December." Holders of specie became alarmed and within 27 days the bank had swept in 45,000,000 livres.

Payment in coin was officially forbidden. The Stock Exchange was closed, nor was it reopened until 1724.

On May 22, 1720, by decree, specie was reduced by two-thirds (an early example of debasing the gold standard) so that 500 livres in the new money would be equal to 1500 livres in the old. This upset the whole of Paris. Confidence was no longer in a bad way, it was dead. Everybody was overburdened with paper money and believed he was ruined. The entire kingdom was seized with panic. Millions had danced before the eyes of the speculators—who now danced head long to destruction.

On June 1, 1720, Law was made Councillor of State of the Army, director of the bank and of the company and Intendant General of Trade, with the right to a seat on the Council of the Regency.

In June and July, 1720, affairs were in a terrible shape. No one, at least none of the better sort of men, had a single pistole to his name. Tradesmen were refusing notes. On the 17th July Law fled to the Palais Royale, which he dared not leave for ten days.

In August, 1720, Law reorganized the Compagnie des Indes, and on September 10th that Company acquired the Compagnie de Saint Domingue.

Law watched his great work crumble to pieces and finally fled from Paris on December 12, 1720, under false passports supplied by the Regent, in a chaise furnished by Madame de Prie, and with the Duke's master of hunt, Sarrobar, in charge. After his death a decree of June 18, 1729, declared that he owed nothing to the king or to the Compagnie des Indes.

Cotton Consumption

Consumption of cotton in the United States for the 12 months ending July 31 amounted to 6,155,525 bales, a gain of 26 per cent over last season. Southern mills consumed 5,086,000 bales, or nearly 83 per cent of the total used by all American mills. The increase in the South as compared with last year was 1,053,000 bales.

American cotton has been moving to domestic and foreign mills at a materially higher rate in recent weeks than for the corresponding period of the past two years.

THE SOUTH—

By

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America's Horizon of the Future

OUT of the travail and pain of our economic catastrophe economic planning has been born. Thinking men are convinced that the planlessness of American society must go.

We in America stand severely condemned because we have been singularly blessed with abundant resources both physical and human. But we have drifted aimlessly. We cannot go on in the future as we have in the past. We must start to rebuild a permanent society whose cornerstone shall be the economic security of each citizen. We have the wealth, the resources, the ingenuity, the brain-power to give to all a peaceful secure life here. And it is the welfare of all which must be the goal of any planned economy.

Now it is in the field of regional planning that the South emerges as the greatest hope of the American people. Here is America's horizon of the future. This is in no sense in disparagement to any other part of the U. S. What is best for each region will ultimately prove best for the nation. If this be not true then there is no nation. And going further, if what is best for each nation is not best for the world then there can be no internationalism. It is futile to talk of world economics until each nation has put its own house in order.

Economists and statesmen are prone to bemoan the passing of the American frontier. It has not gone. It needs but to be rediscovered and to be redefined. That new frontier will be reached only when our American standards of living are both universal and secure. With a planned economy, the South today offers to the people of America that new hope and vision which translated into the enthusiasm and fire of the days of the pioneer will lead our people to the promised land of economic security.

What the South does may well be a turning point in American history. It is the youngest part of our nation as far as industrialism is concerned. It is in a position to avoid the mistakes made by older sections and older nations in their impacts with the Industrial Revolution. Without undue elaboration, the South appears able to build a secure

future both for itself and for the nation because of the following facts:

1. It has safely passed through a one-crop agricultural economy, a one-factory industrial economy and is now on the threshold of an orderly, balanced economic development, in which a varied agriculture will be coordinate with a diversified industry. The South has discovered that a strictly farm economy does not produce that surplus capital necessary for the development of its natural resources. The result has been absentee exploitation, the profits of which did not stay in the South but went to the manufacturing interests of the North and East. It then tried the experiment of mills in the cotton fields only to learn that nearness to raw materials was not so important as nearness to markets owing to the freight-differential in favor of raw materials. Therefore she needed markets near at hand. The center of population is moving Southwestward and the South will soon combine the predominating advantages of nearness to raw materials and nearness to markets.

2. The South occupies also a distinct transportation advantage in reaching the export markets of Central or South America. It is impossible to exaggerate the importance of a growing export trade to the future of the Nation. This relative cheapness in reaching these markets to the south constitutes nearness to markets in the only real and vital meaning of the term.

3. The South has unexcelled transportation facilities rail, water, motor roads, and airways. It possesses a series of exceptional ports, with most modern facilities, and adequate ocean services. Such sea bases are essential to the prosperity of any region. One of the artificial barriers to a more comprehensive and decentralized industrial development in the South has been the basing-point system of rate-making. This illogical method is being revamped by the Interstate Commerce Commission and this will materially aid in preventing too great a centralization of industries and manufacturing.

4. The South is rich in minerals, forests, power resources, and fertile soil.

Petroleum, coal, water-power! These three major energy producers are here in abundance. The Tennessee River project is but one of many such gigantic plans possible of consummation in the South. Forests can mature into saleable products so much sooner here! One can ponder in amazement over the possibilities in forest conservation and in the reforestation of the marginal and sub-marginal farm lands. Thus can be built a lasting foundation for the pulpwood and rayon industries. The growing industrialization of the South will make necessary an ever enlarging dairy and poultry industry. Her soil will render market gardens and truck farming profitable. Consider Texas! It is possible to make a thousand laudatory statements about the possibilities of that one Southern State without fear of successful contradiction.

5. The South's warm even climate renders the struggle for the bare necessities of life less severe. Problems of housing, fuel and clothing are minimized. What an opportunity to provide wholesome recreational activities for all.

6. The South presents a unique opportunity to carry out a sane regional plan. For here we can build a new social edifice designed to transform regional advantages into human values. Here can be developed industries in suburban or rural localities away from city congestion! Here can be developed farm communities each supplying the needs of its nearby industrial areas! Here can be erected planned cities, with parks, libraries, churches, schools! Here can be provided cultural and educational opportunities for all! Here can added leisure be enjoyed to the full!

7. The South possesses an intelligent, capable labor supply. This group of artisans successfully mastered the intricacies of machine manipulation after over a century of close application to a simple agriculture economy. In accomplishing this feat the so called "poor Whites" astounded the Northern industrialists as well as the Southern aristocracy. It is entirely possible in the South to afford the wage earning class a standard of living as high as in the rest of the country and at the same time to pay lower wages. However, this should not be the goal of Southern industries. By paying wages equally high with the balance of the nation the South can give its workers a higher standard of living. And it is basically due to the failure of capitalism to return sufficient purchasing power to its workers in the form of wages, that we have been forced to suffer this unprecedented depression. High capital profits carry with them the germs of the destruction of our capitalistic society. The South can and must avoid such a grave error.

GROWTH OF DAIRYING IN THE SOUTH

By

J. H. Kraft

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Chicago, Ill.

THERE are few American industries, either old and established or new and booming, which can claim the enviable record set by dairying and cheesemaking in the South during the past decade. Less than ten years ago, when a cheese factory was established in Dyersburg, Tenn., followed by several others in Mississippi, cheesemaking was very much of an experiment in the southern part of the United States—although a careful preliminary survey had indicated that the possibilities of the industry were practically unlimited and that, properly conducted, dairying and cheesemaking could be established on a fundamental and profitable basis for Southern agriculture. Today they are established as an important and growing Southern industry. Cheese factories are in operation in 10 Southern States, providing a steady year round market for farmers who have diversified their activities with dairy farming.

Kraft-Phenix Plant at Atlanta, Ga.

Southeastern Divisional Office and Manufacturing Headquarters of the Kraft-Phenix Cheese Corporation, Chicago, Ill.

Although those familiar with the tremendous production in established dairy States regard Southern dairying as hardly past the pioneer stage, with bright future prospects—this young and growing industry produced more than 25,000,000 pounds of cheese last year. Translated into cash for the South its sale has brought a substantial income to thousands of dairy farmers. The growth of the industry in this section is even more remarkable when it is considered that all branches of the industry have grown up in less than a decade. Dairying in the South has seen its greatest expansion during the past few years, in an era which has seriously tried the worth of all industries. The fact that the industry has grown steadily from its inception shows how important it can become to the South in the future.

Economists preached diversity of crops for the South for many years, but in the past ten years, this new Southern industry, already established in many points in the South, has indicated that diversification can be practical for Southern farmers. Though still a pioneer industry in the South, dairying and cheesemaking are becoming increasingly more important daily, for the evident reason that they provide Southern farmers with a constant year-round cash crop—a vital factor in a section of the country where cotton had been the principal cash crop. Its future importance will depend on the industry and scientific intelligence with which the Southern farmer builds it up. It is, however, encouraging to observe

the steady indication of his determination to build on a sound and scientific basis.

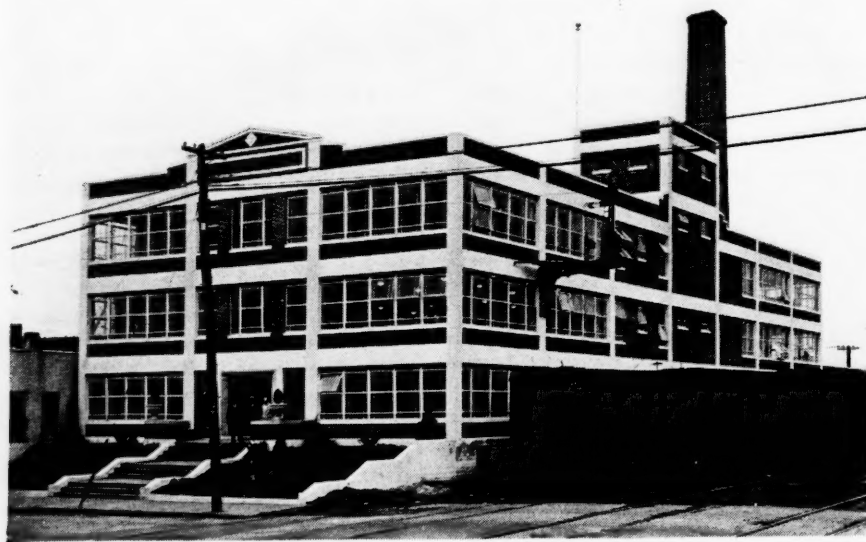
State after State has undertaken dairying in its several branches. Cheese factories are now found in Georgia, South Carolina, North Carolina, Tennessee, Alabama, Mississippi, Arkansas, Oklahoma and Texas. All of them are producing cheese equal in quality to that produced anywhere. Their production of 25,000,000 pounds of cheese has found a quick market in the Southern States where per capita cheese consumption has always been higher than in any other section of the country. Six years ago, the South imported its cheese from Northern states. With its newly established dairy industry the South now produces a substantial share of its own requirements. In addition, the Kraft-Phenix practice of providing a market for all the high grade milk which could be produced by the farmers of each dairy section has maintained quality standards at a high level. With this assured outlet for the milk "crop," fine dairy herds now graze upon the abundant pasture lands of the South.

The idea that cheese could be manufactured successfully with profit to the dairy farmer in the South originated with J. L. Kraft and it was through the efforts of Kraft-Phenix that its first cheese factories were established in this section in 1926 when the industry had its inception.

Previous to the Southern development, a similar program had been undertaken successfully in Idaho. At the instigation of Governor Davis, in 1922, Kraft assisted in working out a complete dairy program for that State. A similar program was undertaken in Montana with equally successful results.

The South offered and continues to offer a wealth of many favorable natural conditions for successful dairying. The long grazing season, abundant water supply—these offer tremendous advantages.

Favorable natural conditions for pasturing dairy stock have been and will be an important factor in the success of the industry, but it will take more than good climate and abundant water to enable the Southern farmer to compete successfully with the Northern dairy farmer whose scientific control of dairying has extended over many years. On the other hand, the conditions of heat and moisture which make for ideal grazing also made it necessary to develop highly spe-



cialized and new methods of cheese manufacture to cope with varying degrees of temperature and humidity.

Although conditions are right for abundant pasture land, pastures do not grow without being planted. Careful study of dairying with all of its attendant problems of pasturing, and improving herds, are necessary to the successful future of the industry in the South. The necessity for constant improvement of dairy herds cannot be too strongly urged upon any section of the South which would solve its crop diversification problem with dairying.

The costs of producing milk in the South are still somewhat higher than those in the North where dairying has been established from the beginning of our agricultural history. In order to compete with the skilled Northern dairyman, the Southern farmer must increase the quantity of milk per herd. He can do this only by painstaking and constant consideration of all phases of dairying. He must build up his herds, he must plant and care for his pasture land. He must make scientific provision for such winter feeding as is necessary. The trench silo, which can be made easily and with small expense to the dairy farmer in the South, is an important solution of the winter feeding problem. Year-round attention to scientific feeding and milking are absolutely essential to the future success of Southern dairying.

Northern dairymen have the great advantage of years of experience in building up pasture land, and in maintaining dairy herds. In order to compete successfully with them, and in order to insure a profitable future milk crop for himself, the Southern dairyman must undertake dairying as he would any great new industry, or any new business. Constant study of dairying and its methods, and unflagging energy in improving dairying standards will bring the industry in this section to the prosperity and profit which natural conditions throughout the South warrant.

Progress made in sections of each of the ten Southern States where the industry is established indicates that dairy farmers everywhere have already begun to build the industry along these principles.

Universal Southern interest in cheesemaking has made it a civic, county-wide, State-wide and section-wide effort. Men and women, and children through the 4-H clubs of the section contribute their most intelligent effort toward making dairying an important industry. In this sense it is more than a private business, more than an assured income for a comparatively small group of farmers. It is an industry in which the entire community shares.

The history of cheesemaking in any

one of the Southern States is typical of all. Texas provides an interesting example: Previous to 1927, Texas' only contribution to the science of cheesemaking was that the State had inspired the name for a particular kind of American Cheddar Cheese—the "Longhorn," a 12-pound cheese about 5 inches wide and 14 inches high. In 1932, when profit crops were few and far between, dairying brought Texas dairy farmers hundreds of thousands of dollars. The market for milk in the State has been constant, increasing since 1927 when the first great regular market for milk was established at Denison.

This particular cheese plant offers an interesting and typical example of the entire Southern development. It is a model factory, producing all varieties of cheese which can be made in America. Its name and fame have spread far beyond the confines of Texas, the excellence of its cheese production being one of the wonders of the dairy world.

A vital industry from the standpoint of the South, cheesemaking is equally important from the standpoint of each individual community, each small section where dairying has attained the standing of regular "crop" production.

The success of cheesemaking in Carlisle, Ark., is a striking example. Here is a small typical Arkansas town of about 900 population. Previous to the coming of the dairy industry, the principal crops of the community were rice, a comparatively new crop in the State, cotton and tobacco. The difference in the wealth of this community wrought by the introduction of cheesemaking is apparent in a survey of conditions there. Cash crops had been virtually nonexistent. Six years ago the community of Carlisle lived, for the most part, on "next year's cotton." During the cur-

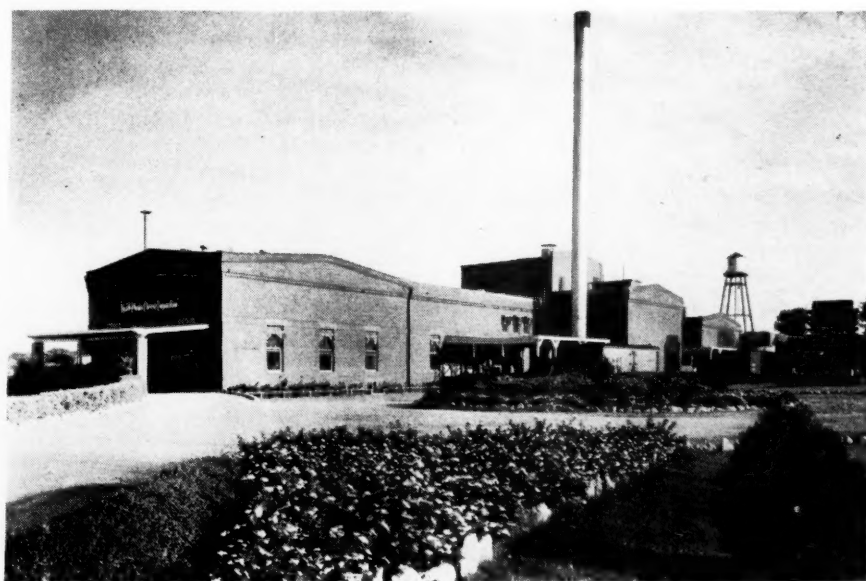


Typical of the Smaller Cheese Factories in the South

rent year, the plant paid to dairy farmers of the section an average of \$10,500 each month. What this means to the population of the Carlisle community is reflected in the general well-being of the section and its inhabitants. One significant fact is that the entire population is self-supporting. During the trying days of 1931 and 1932, no one in the community applied for Red Cross aid. The sixth anniversary of the establishment of the cheesemaking plant at Carlisle was celebrated this summer. At that time, the plant had increased its capacity from less than 25,000 pounds of milk to more than 100,000 pounds of milk daily. In Gallatin, Tenn., or Atlanta, Ga., Denison, Texas, or Corinth, Miss., the experience of dairying throughout the South has been virtually the same.

Cheesemaking has proved a steadily growing and increasingly profitable industry for Southern farmers. Similar instances might be related in each community where the industry has been started. An established and regularly increasing market for milk has convinced the South of the desirability of the industry, and the intelligence and enthusiasm with which the South has built up dairying wherever it is established in this section, is proving an outstanding example to the rest of the dairy world.

Kraft-Phenix Plant at Denison, Tex.





Sanitarium and Hospital Group of Buildings

A SCHOOL THAT IS NOT ONLY A SCHOOL

By

E. A. Sutherland, M.D.

APPROXIMATELY fifteen centuries before the Christian dispensation the foundations of a mighty nation were laid by planting the children of Israel on the land. It is generally conceded that the leaders in that back-to-the-land movement were prompted by divine inspiration. Every man was a land-owner. By law property remained in the family, passing from generation to generation with a most interesting system of adjustments every fifty years, in order to restore the balance that might have been brought about by misfortune or injustice.

The acreage was small; cultivation of the land was intensive. Each man was, to a large degree, independent. Extreme wealth and extreme poverty were alike impossible. Simplicity marked the lives of individual members of the community, simplified living with a high degree of mentality and an outstanding degree of spirituality.

This people had a system of schools for the youth, located on the soil, teaching those industries which were necessary to maintain the economic system of the nation. Men of other nations came here seeking wisdom in the arts

Combined Work and Study Program of the Nashville Agricultural Normal Institute Fulfills Its Mission as a Training Center for Selected Students to Prepare Them for Service as Community Workers Along the ing, Health Work and Lines of Agriculture, Teaching, Medical Evangelism

and crafts, business acumen, and statesmanship.

Certain elements in that system of training have been recognized and practiced by each nation that has held world supremacy since those days. When our nation was in its formative period, educational sages such as Thomas Jefferson, Horace Mann, and scores of others, understood these principles of self-government and self-maintenance, and taught that they were vital factors in the education of youth destined to be leaders in a democracy.

The educational history of our country records the struggles of a number of outstanding institutions in their endeavor to maintain these principles. You find emphasis on the idea that a school should not separate the student from life, but that life interests and activities should be an integral part of the school program.

Approximately thirty years ago a group of teachers imbued with similar ideas and with profound faith that our youth

today during the period of their education, should have experiences akin to those that will face them when school days are over, came to Tennessee for the freedom offered in the South for the development of such ideas. They located on a farm in the Valley of the Cumberland River, gathered about them a group of students intent on the serious concerns of life, and willing to earn their education by manual labor.

In 1904 the enterprise was chartered under the laws of the State of Tennessee as The Nashville Agricultural Normal Institute, its purpose as specified in the charter being "to train teachers, farmers, medical workers, and others to carry forward community work, devoting at least a portion of their time to unremunerative work for the uplift of humanity."

The post office address of the institution is Madison, Tennessee, a suburb of Nashville, capital of the State, and so, for short, it is often spoken of as The Madison School. Beginning very small, it has grown, increasing in influence and in ability to serve people.

For a number of years it operated as a junior college, with an affiliated high school, both accredited by the Association of Colleges and Secondary Schools of the Southern States. Two years ago it aspired to the dignity of a senior college. This step was taken in consideration of its student body. For two years of college life the students enjoyed the privilege of earning their education while taking their training. They now need that same opportunity in order to meet advancing educational requirements

in the teaching and medical fields which they are preparing to enter.

The casual observer of class room work might see nothing so very different from the traditional four-year college. Closer inspection reveals the fact that this is a Christian training center for which students are carefully selected in harmony with the objective of the institution as stated in the charter. They are preparing for Christian service as community workers along the lines of agriculture, rural school teaching, health work, and medical evangelism. Again, these students carry a combined work-and-study program. Each one divides his day between assigned duties in some industrial department, in which the work is both remunerative and educational, and his academic program.

In order to fulfill its mission as a training center, the institution has added to its original farm a second four hundred acres, having extensive orchards and vineyards, gardens, and general farm interests. It maintains its own dairy, a gold star herd of Jersey cattle; its poultry yards; machine shops for both wood and metal work. When buildings are needed, practically all the constructive work is done by students under the direction of a master mechanic who is a member of the faculty. Some outstanding work has been done in this department, as the new buildings in the senior college group testify.

From the beginning medical work has been an outstanding feature of the institution. On the college campus, and under the same management as the school, is a well-equipped medical and educational center known as The Madison Rural Sanitarium and Hospital. Here students in nursing, dietetics, and laboratory and X-ray technique have their practical duties. There are woodworking shops putting manufactured products on the market; the printing department meets home needs, and is publishing a weekly periodical, and is doing a degree of commercial work. The institution is

known far and wide for its health food products, whole wheat breads and so forth, made in the food factory on the campus, the manufacturing and the sale giving employment and valuable education to young men and women.

In connection with its extension work, recently there has developed a department of art known as the visual education, which produces a high quality of tinted slides, illustrative of health lectures published by the printing department and forming the basis of community lectures and health classes, conducted by students educated for this specialty.

When a student enters the institution an effort is made to ascertain his ability and to direct his education along his chosen line. Careful attention is given to the health of the student, and remedial work is given when needed. It is the purpose to meet to the highest degree possible the needs of the individual student on the physical, mental and spiritual levels.

Madison gathers within its borders promising young men and women who, but for the work program, would be unable to secure a college education. To the limit of its capacity its doors are open to Christian students whose aims are in harmony with the purposes of the institution, irrespective of their financial situation, provided they are willing to earn their school expenses.

There is, however, another angle aside from the financial one in this system of education. Madison is shaping the ideals of young people. It educates them to recognize the dignity of labor. It encourages them not only to maintain

themselves but to consider it a sacred duty to contribute to the uplift and welfare of their neighbors.

The question is often asked, "How can it be done?" The secret of success in this project, to the degree that success has been attained, is due to the cooperative spirit of students and faculty members. A no-debt policy has been rigidly adhered to, income from various industries meeting the operating expenses of the institution, while friends, generous hearted and sympathetic with the efforts of the faculty, have donated buildings and equipment. Again, the spirit of consecration is the secret of success.

There is no longer a question as to the ability of a student to do efficient class work while devoting a portion of the day to earning his living. That fact has been tested in many places and record made of the efficiency of the work done by many students under these conditions. In a number of instances students from The Nashville Agricultural Normal Institute have carried this program through a premedical course, and have then entered the medical school and on completion of the medical course have passed the examination of the National Board with honors. Students from the institution are proving their efficiency also in the conduct in various parts of the South of other education and medical institutions.

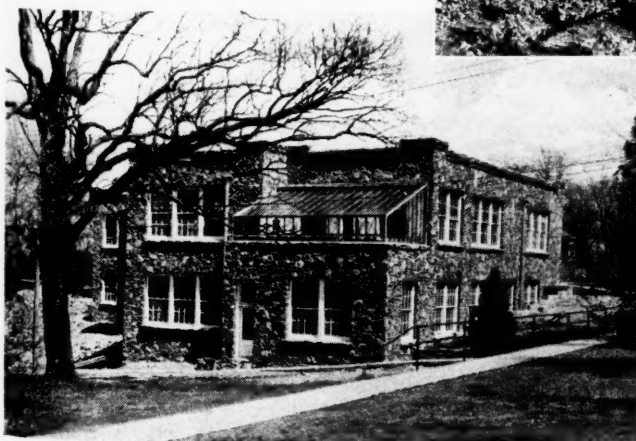
Madison encourages groups of men and women on the completion of their course here to locate in some rural community, cooperate with others in building up the agricultural interests, operate a community school for the children, teaching industries in addition to the ordinary school curriculum, and meeting the medical needs by building and operating a sanitarium.

It is in such ways that The Nashville Agricultural Normal Institute is endeavoring to fulfill its mission to the youth and to the community.

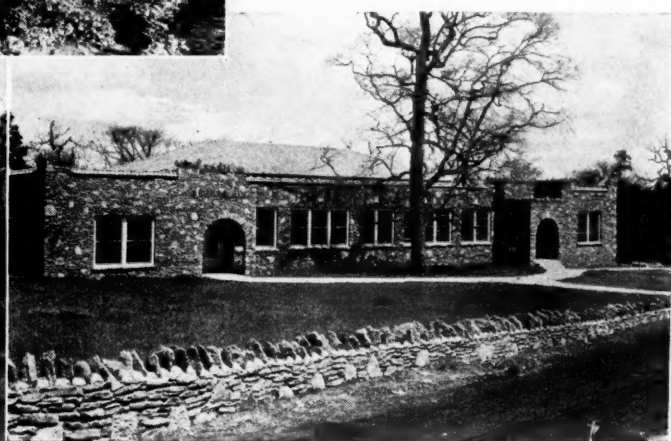
An 800-Acre Farm Contributes to the Support of the Students



Modern Science Building Recently Constructed by the Students



Demonstration School Building in Which Teachers Are Trained for Rural School Work



\$29,351,000 NEW CONSTRUCTION IN SOUTH

CONTRACTS awarded for construction, engineering and building projects in the sixteen Southern States during August reached a new high mark of \$29,351,000 for 1933, as compared with awards of \$23,158,000 during the preceding month and with \$29,144,000 for June. Only lettings of \$10,000 and up, as compiled by the *Manufacturers Record Daily Construction Bulletin*, are included.

Industrial Plants Feature New Construction in August

August contracts for industrial plants aggregated \$16,151,000. This is the highest monthly total this year. In June, when the previous high for 1933 was recorded, awards for industrial enterprises amounted to \$14,303,000, and one plant accounted for \$7,000,000 of the total. Last month the DuPont Rayon Company initiated a \$3,000,000 expansion program to cover a two-year period at its Nashville, Tenn., plant. The Ethyl-Dow interests awarded contracts for the first units of a plant to extract bromine from sea waters to be erected near Wilmington, N. C., at a cost of about \$2,000,000. The Anheuser-Busch interests announced an additional expenditure of \$1,500,000 for the extension of its brewing facilities, and a like amount for supplies and materials. The Pan-American Airways let contracts for a hangar and auxiliary facilities at Miami to involve an expenditure of \$1,000,000.

Textile Industry Speeds Diversification of Output

The textile industry continued to expand its manufacturing facilities by diversifying its output, by adding finishing units to established plants, by enlarging and modernizing power plants and by installation of the newest type equipment in the place of obsolete machinery.

Rayon Industry Concentrates in the South

A further concentration of the rayon industry in the South is indicated. Practically every one of the plants in this line in this section has under way, or in prospect major expansions.

Breweries Prominent in New Work

New breweries are under way and projected in the Southern States that have

August Contracts Set High Mark for 1933— Industrial Plants Feature Month's Building Operations

come out for repeal or are expected to take such action. Awards last month for breweries include: \$400,000, Knoxville, Tenn.; \$250,000, Houston, Tex., and \$100,000, New Orleans, La.

For Refrigerated Steamship Service

Steamship lines are expending millions of dollars for installation of refrigerating and cold storage facilities on vessels as well as for the erection of precooling plants in Florida ports to handle citrus and vegetables for Northern markets. The Merchants and Miners Transportation Company, the United Fruit Company and the Clyde Mallory Lines figure in this new type of service which will be inaugurated about November 1, between Jacksonville, West Palm Beach and Tampa and Philadelphia and New York.

Sewer and Water Works Projects

Awards for sewers, drainage and water works projects totaled \$398,000 in August, as compared with \$230,000 for similar work in July. Indications are that many millions will be expended within the next few months to provide adequate sewage disposal plants and water supply systems for Southern towns and cities, the majority of which will be assisted in financing such ventures by the Public Works Board.

Government Building in Sharp Decline

The showing in August is noteworthy when it is considered that awards for city, county, Federal and State building projects were only \$1,654,000, as compared with \$2,745,000 in July. This decline is due to the holding-up of all Government buildings, such as post offices, courthouses, customs houses, until Federal officials determine on a policy. Meanwhile, plans and specifications have been completed or are under way for some 900 Federal buildings in all parts of the nation, many of them in the smaller towns and cities of the South.

Dwelling Construction

Residential construction continues at high level in the South, indicated by the award last month of contracts totaling \$1,521,000, and of \$1,932,000 in like awards in July. Residential construction and maintenance on a nation-wide scale, which has hastened recovery in the past following periods of depression, promises again to be an important factor in reviving business and industry. Property-owners and home-buyers, seeing the long era of bargain prices drawing to an end, are initiating residential building operations in considerable volume.

New and Better Stores

Awards for new stores and for renovating established business places last month totaled \$402,000, as compared with \$465,000 in the preceding month. Apartment house and hotel construction accounted for \$329,000 in awards in August, as compared with \$173,000 like awards in July. Bank and office building awards jumped to \$310,000 in August from \$75,000 in July.

Considering the construction and building program in the South as a whole it is apparent that operations under way and projected cover a broad field, with practically every section of the South sharing in the forward movement. The high totals recorded in recent months are noteworthy because previously government construction for a time dominated the picture.

CONSTRUCTION ACTIVITY FOR AUGUST, 1933

| | Contracts Awarded | Contracts to be Awarded |
|--|----------------------|-------------------------------|
| General Building | | |
| Apartment Houses and Hotels | \$329,000 | \$385,000 |
| Association and Fraternal | 100,000 | 60,000 |
| Bank and Office | 310,000 | 253,000 |
| Churches | 274,000 | 210,000 |
| Dwellings | 1,521,000 | 875,000 |
| Stores | 402,000 | 205,000 |
| | \$2,936,000 | \$1,990,000 |
| Public Buildings | | |
| City, County, Government and State | \$1,654,000 | \$8,847,000 |
| Schools | 751,000 | 2,762,000 |
| | \$2,405,000 | \$11,609,000 |
| Roads, Streets and Paving | | |
| | \$5,523,000 | \$5,998,000 |
| Industrial and Engineering Projects | | |
| Dredging | \$410,000 | \$1,225,000 |
| Filling Stations, Garages, etc. | 295,000 | \$5,000 |
| Industrial Plants | 16,151,000 | 13,658,000 |
| Levees, Retractions, Dikes, etc. | 1,008,000 | 650,000 |
| Warehouses | 180,000 | 63,000 |
| Sewers, Drainage and Waterworks | 398,000 | 11,531,000 |
| Miscellaneous Projects | 45,000 | 50,000 |
| | \$18,487,000 | \$27,262,000 |
| Total | \$29,351,000 | \$48,859,000 |

That night, like clockwork, came Long Distance calls from field men in all parts of America



BECAUSE Long Distance gets things done quickly and definitely, and cuts costs in many ways, it has the approval of executives in every line of business. It is their long right arm . . . in getting quick delivery on purchases, in contacting dealers and distributors in distant cities, in handling important administrative matters.

An opportunity to discuss all details

The telephone is of particular value in everything relating to the selling of merchandise. An example:

By midnight of the day the Plymouth Motor Corporation introduced its 1933 car to the public, they knew exactly how it had been received in every corner of the country. For four hours, from 8:30 P.M. on, the staff in Detroit

held telephone conversations with 49 regional sales supervisors . . . thus getting word-of-mouth reports of the reactions of car owners and dealers in every territory.

"The results could not have been more satisfactory," says the Sales Manager. "The calls came in like clockwork at five-minute intervals. We knew that the car was an immediate success. We learned what models were selling fast, which helped in scheduling production. We were able to give the men encouraging news from other sectors—good strategy in any sales drive. And we could easily iron out little misunderstandings, because of the opportunity the telephone gave to discuss them fully.

"This made the fourth time we have used the telephone

reporting plan within a year—each time an outstanding success."

The Bell Telephone System works in close co-operation with business concerns of every kind in helping them to make more effective and economical use of this valuable service. We will gladly do the same with you. A call to the Business Office will bring a representative at your convenience.

TYPICAL STATION-TO-STATION RATES

| From | To | Daytime | 7 P.M. | 8:30 P.M. |
|-------------|--------------|---------|--------|-----------|
| New York | Philadelphia | \$.50 | \$.40 | \$.35 |
| Atlanta | Louisville | 1.45 | 1.25 | .85 |
| Chicago | Boston | 3.25 | 2.65 | 1.75 |
| Denver | Detroit | 4.25 | 3.50 | 2.50 |
| Los Angeles | St. Louis | 6.00 | 4.75 | 3.50 |

Where the charge is 50 cents or more, a federal tax applies as follows: \$.50 to \$.99, tax 10 cents . . . \$1.00 to \$1.99, tax 15 cents . . . \$2.00 or more, tax 20 cents.



IRON, STEEL AND METAL MARKET

Consumers of steel placed orders sparingly during the latter part of August, as a result of which steel ingot production tapered off. The let-down, however, is not disturbing to steel authorities, who hold that the lull in new business was to be expected, and that this year it came very much later than is normal. While expressing the belief that there will be a resumption of good demand in the near future, steel authorities point out that much will depend upon the railroads entering the market in the fall months and the speeding up of public work. While operations declined to about 48 per cent of capacity it is far above the 14 per cent reported during the bottom of steel activity.

Increased Costs

Steel companies are experiencing increased costs, particularly for labor, as a result of the steps taken to cooperate in the Government's program to bring about improved general business conditions. For the time at least, these increased costs cannot be offset, it is declared, by higher prices for steel products. Eventually, there will be advances in quotations for various products, but there is now no evidence that such action will be taken, the general feeling being that higher prices will not be established until conditions under the code have been tried out and the necessity for price advances has been definitely established. Although advances are expected in some lighter products, prices on heavy finished steel probably will remain at present levels.

Price Stability

Under the code price stability should result, a condition which has been lacking throughout the depression, since concessions have been granted on various contracts and other practices have disturbed the price situation.

Pig Iron Prices Advance

Pig iron prices last month were increased about \$1.00 a ton in the eastern districts, this being the first raw material to advance. Base prices on foundry iron at mid-western and eastern Pennsylvania furnaces at the end of August was \$17.50 a ton. At Birmingham the price increased from \$13.00 to \$13.50 a ton.

Declining steel mill activity last month dampened the scrap market somewhat. At Pittsburgh the quotation for heavy melting steel dropped 25 cents a ton.

Prices are largely nominal, however, since most consumers have enough scrap on hand to carry them for a short period. A sharp decline in the export of iron and steel scrap also affected the domestic market.

Structural Steel Buying Above 1932 Average

The tonnage of structural steel booked by 175 companies reporting to the American Institute of Steel Construction for July, was 56,234 tons, as compared with 53,688 tons for 129 reporting companies as an average for 1932. Average bookings during the first quarter of this year, 178 companies reporting, were 68,908 tons, while second quarter average, 187 companies reporting, was 57,596 tons. July shipments were 50,973 tons, as compared with 64,486 tons as the 1932 monthly average, 50,745 tons as the first quarter of 1933 average, and 60,206 tons as the second quarter average. Numerous private and public projects to be undertaken with the aid of government financing have not yet materialized. Once a decision is reached on the public building program there will be more activity in construction lines with heavier buying of structural steel.

Auto Makers Buy

Steel takings by the automobile companies have been the one bright spot. While these consumers have not been buying far ahead, they have purchased more steel than was estimated a month or six weeks ago. This has been due to the good demand for new automobiles. In fact, so substantial has been the demand for a number of makes of motor cars that work on new models to be brought out this fall has been delayed.

Sheets, Tinplate and Pipe in Good Demand

Demand for sheets and tinplate has been surprisingly strong. This is in contrast to the demand for most finished steel products. Pipe lines to serve new refineries and to supplement existing oil transporting facilities have created a good demand for pipe.

There is a strong feeling that there will be an early fall revival in buying, spurred on by the general expectation that the fourth quarter will see higher prices established. Heavier railroad purchasing in this direction is anticipated.

Foundries to Profit From Sewer and Water Works Jobs

Demand for cast iron pressure pipe in the Birmingham district this fall will be very active judging from present indications, due largely to the many water works and sewer projects contemplated by towns and cities in the South and Southwest. These projects will be financed by money advanced by the Federal Government. Scores of applications have already been filed; a few loans have been granted, while decisions are yet to be rendered on the majority of the proposed improvements. Many communities that have heretofore been without adequate water supply and distribution systems, sewage disposal plants and pipe lines, now propose to go forward with such projects with the financial aid of the Federal Government. This will create a demand for pipe, castings, pumps and like equipment, much of which is produced in Southern plants, which will share largely in the new business.

Would Reorganize Empire Steel

A plan suggested for the reorganization of the Empire Steel Corporation, Cleveland, providing for a new company to acquire assets and plants of the company, was proposed last month to bondholders and general creditors of the corporation. Since May, 1931, the company has been operated by C. H. Henkel, Receiver, under a ruling by the Federal Court. The plan would provide for the raising of approximately \$500,000 new capital through common stock and bonds of a proposed first mortgage, bond issue to be authorized by the new company. The new corporation would be chartered under the laws of Ohio, with an authorized capital stock of 125,000 shares of no par common and authorized first mortgage bond issue of \$1,500,000.

Coke Production Mounts

For the third consecutive month, production of coke has shown an increase over the preceding month, according to the report of the Bureau of Mines, United States Department of Commerce. The output of both beehive and by-product coke during July, the report says, totaled 2,865,715 tons, or 92,972 tons per working day. This represents an increase of 21.3 per cent in comparison with the daily rate prevailing in June and the July average of 92,972 tons is the highest daily rate since May, 1931.

TENNESSEE

Pledges

**PROMPT DELIVERY
and
FINEST QUALITY
on Steels
for Every Type of
Steel Construction**

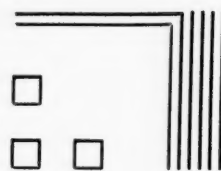
PRESENT UP demand is at last asserting itself and industry in every line is experiencing a quickening pulse. We are entering into a new industrial era—an era which will be marked by the consumer demand for **QUALITY** and **SERVICE**. Tennessee pledges you both and for the convenience of its customers offers a diversified line ranging from wire and wire products to the heaviest rails and structural steel sections. Let us demonstrate to you how scrupulously we live up to our pledge.

**TENNESSEE
COAL, IRON & RAILROAD COMPANY**

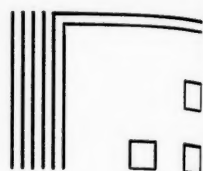
Subsidiary of United States Steel Corporation

*General Offices: Brown-Marx Bldg., Birmingham, Ala.
District Offices in Principal Cities.*





GOOD ROADS AND MOTOR TRANSPORT



Mississippi Road Program

Mississippi's State road system, by the first of the coming year, will be enlarged approximately 255 miles of improved highways to be constructed under the new \$10,000,000 road program now being launched by the State Highway Department, according to a summary prepared by E. B. Cavallo, State construction engineer. This summary covers the 1932 Federal emergency program and involves more than \$4,500,000 of highway construction which the Department is pushing to completion, as it begins its big program under the terms of the National Industrial Recovery Act.

Thirty-eight major projects are involved in construction to be completed this year covering 112 miles of concrete pavement costing \$1,331,857; 28 miles of asphaltic concrete pavement, \$471,415; 114 miles of grading, \$1,290,945, and 1.12 miles of bridges costing \$479,477. The 1932 program is being carried out under the 30-hour week and in accord with other Federal labor provisions, so that when the work shall have been completed it is estimated that employment will have been provided for between 10,000 and 15,000 Mississippians.

In line with the Government's desire for a wide distribution of benefits under its emergency works, Mississippi's road program is scattered over the entire State, but the State Highway Department's policy is to insure a well connected network of improved roads when finances permit. Several of the 38 projects involved in the current program are significant, either for engineering features or for benefits to the areas they serve. Mr. Cavallo points out that a 16-mile stretch of concrete pavement on U. S. Highway 61, north of Clarksdale, without a curve, is destined to be one of the outstanding highways of the South, with a 120-foot right-of-way and special boulevard section. An additional 16 miles planned as an extension to this section would make this road one of the nation's longest straight line tangents. This highway links Memphis with the Delta and bears heavy truck traffic.

Outstanding bridge projects in the program include a bridge across Pearl River, the Two-State bridge near Pearl-Lington which is a part of the Louisiana-Mississippi coast "airline" highway, and the new \$111,000 bridge at Columbia. The last named project represents a radical departure in engineering design,

it is declared, the bridge being 696 feet long. It consists of a 450-foot cantilever span and six 41-foot concrete girder approach spans. Overhead truss work has been eliminated by the cantilever span composed of two anchor arms and a central clear span of 200 feet supported by channel piers.

\$6,998,000 for Texas Road Maintenance

The Texas State Highway Commission, Austin, has made an appropriation of \$6,998,782 for the general maintenance of State highways during the fiscal year beginning September 1. This appropriation is in addition to \$39,900 allowed for testing road materials, including the cost of the materials, and \$35,000 for maintenance and equipment of the highway patrol.

Truck Owners Organizing

Plans are under way for the organization of the South Carolina Motor Truck Owners Association under the preliminary code similar to that under which members of the North Carolina Motor Truck Owners Association recently began operations, according to F. M. Burnett, Greenville, S. C., secretary of the former. A code has been adopted embracing the same hours applicable to railroads. This will permit truckers to work six days of eight hours each, with a 56-hour week of seven days. Under the preliminary code, minimum wages will be 30 cents an hour for drivers and 25 cents an hour for helpers and clerical help. Time and a third will be allowed for overtime and a provision is made on long hauls for a 16-hour day, provided the weekly total does not exceed 48 hours.

Bus Operators Organize

At a recent meeting in Charlotte, operators of motor bus lines in the two Carolinas organized the Bus Operators' Association of the Carolinas and, as such, approved the national motor bus code. The new organization applied for membership in the National Association of Motor Bus Operators, and will meet in Charlotte again within a few weeks to adopt a constitution and by-laws.

Officers of the new organization in-

clude: Paul Sheahan, Winston-Salem, N. C., president; L. A. Love, Charlotte, and H. H. Hearn, Raleigh, N. C., vice-presidents; J. P. Hightower, Raleigh, secretary and treasurer. Directors were elected as follows: J. A. York, Asheboro, N. C.; L. R. Gibbons, Asheville; David Dunlap, Anderson, S. C., and Hamish Turner, Spartanburg, S. C.

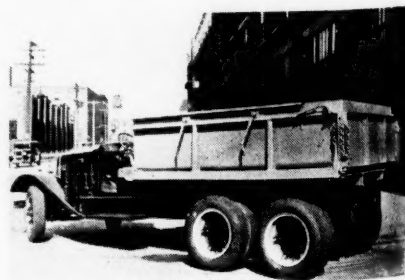
Arkansas Highway Engineer

W. W. Zass, Little Rock, Ark., acting chief highway engineer since the present State Highway Commission assumed office last February, has been appointed chief State highway engineer. He was formerly president of the Arkansas Engineers Club and the Little Rock Engineers Club, and is now vice-president of the Mid-South section of the American Society of Civil Engineers.

Grico 2-Axle Drive Cuts Costs

Designed to meet exacting demands for maximum power from trucks engaged in dump work, including levee and other construction, the Gear Grinding Machine Company, Detroit, Mich., recently announced the Grico 2-Axle Drive applicable to trucks carrying any type body. This drive enables the truck to operate at lower cost, it is claimed, and possesses inherent oversize strength. An accompanying illustration shows a Federal 20-A. 2-ton truck, made by the Federal Motor Truck Company, Detroit, fitted with the Grico 2-Axle Drive. It is owned by the Meyer Construction Company, Chicago, and carries a steel body made by the Auto Truck Steel Body Company of that city, with a hoist by the St. Paul Hydraulic Hoist Company, St. Paul, Minn. Wheels are made by the Clark Equipment Company, Buchanan, Mich., and tires by the Goodyear Tire and Rubber Company, Inc., Akron, Ohio.

Federal 2-Ton Truck With Grico 2-Axle Drive



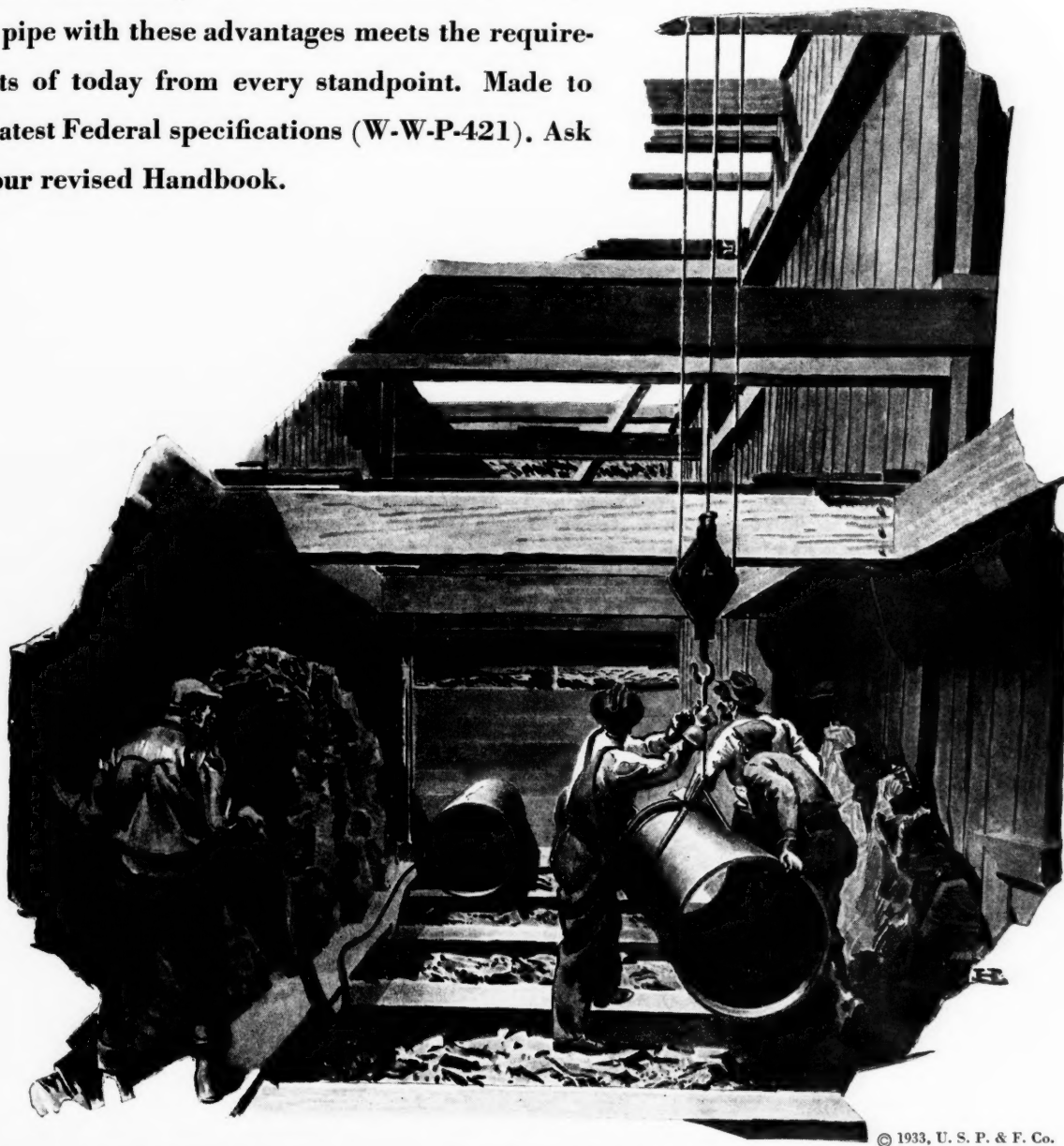
HISTORY

proves and surveys demonstrate the unequalled long life and low maintenance cost of cast iron pipe. U. S. de Lavaud

centrifugally-cast pipe adds to these major economies five definite cost-cutting advantages:

(1) It is now available in 18-foot lengths in all sizes up to 24-inch, which means fewer joints and shorter laying time. (2) It costs less per foot. (3) It is lighter and easier to handle. (4) It has greater carrying capacity for the same outside diameter. (5) It is easier to cut and tap. We submit the self-evident fact

that pipe with these advantages meets the requirements of today from every standpoint. Made to the latest Federal specifications (W-W-P-421). Ask for our revised Handbook.



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U. S. de LAVAUD PIPE

EQUIPMENT

NEW AND IMPROVED

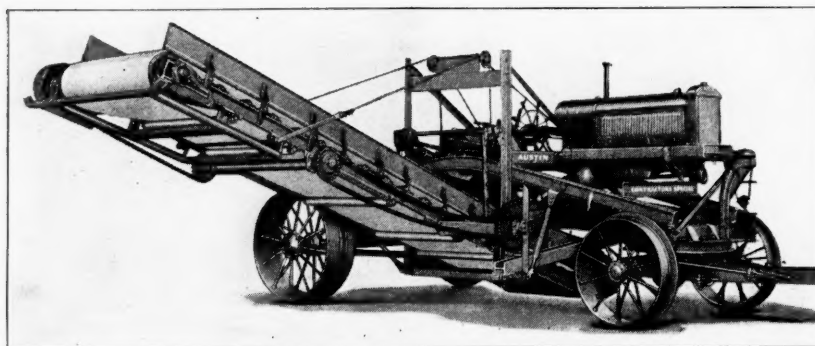
Hercules Full Diesel Engine

Hercules Motors Corporation, Canton, Ohio, announces the development of a six cylinder, solid injection, high compression, full diesel engine for automotive, general industrial, agricultural, oil field and marine purposes. Following Hercules practice, particular attention has been given to symmetry, compactness, and pleasing appearance, with accessibility, durability and reliability as important requisites. The engine, to be known as Model DXL, has a 5-inch bore and 6-inch stroke, and is constructed to operate up to speeds of 2000 r.p.m.

Contractors Special Elevating Grader

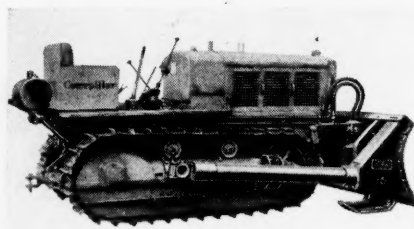
With various improvements and refinements of design, the new Austin Contractors Special Elevating Grader, made by the Austin-Western Road Machinery Company, Chicago, is better balanced, has greater flexibility and greater output capacity than previous models. Both plow and carrier are operated by hydraulic (oil) power controls which consist of but seven moving parts operating in oil. Rubber mountings and cushions are provided at strategic points in the main frame to assure flexibility and balance, while an H-beam frame retains the necessary arch to provide both extra clearance for load on carrier and to keep the center of gravity of the machine at the lowest possible point. The carrier is equipped with anti-friction bearings and is provided with a spiral pan cleaner which prevents dirt from clogging and acting as a brake on the belt. Power for running the belt on the 42-inch machine is provided by a Buda K-325 6-cylinder removable sleeve motor, developing 49 horsepower, and on the 48-inch machine by a Buda K-369 motor developing 53 horsepower.

New Austin Elevating Grader



Athey Hydraulic Bulldozer

The Athey Hydraulic Bulldozer, announced by the Athey Truss Wheel Company, Chicago, Ill., is designed to meet a need for a bulldozer that may be mounted on the new models of Caterpillar Tractors and readily dismantled when the tractor is used for service with hydraulically operated or other types of dump trailers. The new unit is excep-



New Demountable Bulldozer

tionally compact and rugged, adapted to either the Thirty-Five or Fifty Tractor. The blade is of the moldboard type and can be furnished with detachable and cutting edges when desired. Control is from the tractor seat, with "finger tip" selection between the various operating positions of the control lever. The hydraulic pump is highly developed and has a number of exclusive features.

Heavy-Duty Compressor

The Ingersoll-Rand Company, New York City, announces a new single-stage, belt-driven compressor designed for heavy-duty service and available in sizes from 10 to 125 H. P., and for discharge pressures from 5 to 150 pounds. It has one horizontal, double-acting cylinder and operates at moderate speeds. Its designation is Class ES. Low air speeds and small pressure losses obtained by liberal design of air passages and valves insure economy, while these features with effective water jacketing insure low air temperatures.

Cleveland Arch Beam Rail

The Cleveland Tramrail Division of the Cleveland Crane and Engineering Company, Wickliffe, Ohio, recently introduced its 2400 series of Arch Beam Rail having a depth of 8 inches and designed to load up to 2 tons under proper loading conditions. This 8-inch arch beam is identical in construction with the well known 10- and 11½-inch arch beam and is intended for use where it is not practical or economical to install superstructure between existing roof trusses for the support of the standard Tramrail rail. Where supporting fittings may be attached to existing trusses or columns no superstructure is required on spans of 20 feet or less. The Cleveland Tramrail Arch Beam rail is built of a half section of structural steel beam, from the web of which semi-circular sections have been punched at close intervals to form a series of arches. This structural section forms a supporting member for the standard high carbon steel Tramrail rail, which is welded to the beam.

Marion Clutch Type Excavators

To broaden its activities in a market with which it has been associated since 1884, the Marion Steam Shovel Company, Marion, Ohio, is adding to its line a series of clutch type fully convertible excavators. In this new series, it has been sought to secure the maximum in mobility, versatility, long life and strength, in order to meet today's conditions. Speeds of operation and digging power have been materially increased. The new Marion excavators are of the straight friction type, consisting of a primary unit, either gas, Diesel, or a single electric motor connected through a master clutch and speed reducing mechanism directly to the main machinery. Thus, the various functions of hoisting, traveling, swinging, crowding and booming are independently controlled through friction clutches. The crawlers are chain driven and particularly designed for full self-cleaning; main lower frame casting is of steel—rugged and substantial; roller circle is of the "live" type especially designed by Marion; steering is easily accomplished; only two horizontal shafts are used—hoist shaft and horizontal clutch shaft, both mounted on anti-friction bearings; boom hoist consists of drum mounted in main base casting and driven through a self-locking worm, enclosed and running in oil.



Why 12 lamps grew to 700



IN 1925 a large cotton mill in South Carolina ordered a dozen mercury-vapor lamps as an experiment.

- Today over 700 Cooper Hewitt lamps produce the proper type of illumination to weave and inspect the enormous amount of cloth manufactured by this concern.
- These Cooper Hewitt lamps have played an important part in setting the high production standards of this mill. By providing proper lighting for quick and accurate loom fixing and the

right quantity and quality of light at the heddles of the looms, they have speeded up production, improved quality and cut down seconds.

- The dollars and cents advantages of Cooper Hewitt lighting can be proved quickly and with little expense. You will find a test in your own mill well worth while. General Electric Vapor Lamp Co., 819 Adams St., Hoboken, N. J.

GENERAL  ELECTRIC
VAPOR LAMP COMPANY

660 Copr. 1933, General Electric Vapor Lamp Co.

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FINANCIAL NEWS

Closed Banks

Many communities are still being inconvenienced in their daily business affairs by inadequate banking facilities on account of the local bank or banks remaining closed, or operating on a restricted basis. Elsewhere in this issue we are alluding to the statement of the Treasury Department giving \$2,163,000,000 as the amount of funds tied up in closed and restricted institutions; but it is probably considerably more than that when consideration is given to the proportion of deposits that have been applied to stock or beneficial certificates in order to get the banks open. United States Senator Vandenberg of Michigan in his testimony at the Detroit Bank Hearing criticized the Government for putting "liquidity ahead of solvency." It has seemed to this writer a great amount of distress would have been saved in many quarters if that policy had not been adopted. A measure of soundness was used for banks that would almost imply that the money left with them by depositors should be available all at one time on call. Banks with honorable records covering many years, whose loans were of necessity largely in slow paper, such as mortgages, were called to account in a way that added materially to the mistrust, confusion and loss of confidence.

Securities Act

The Federal Trade Commission having charge of the administration of the Securities Act of 1933 reports that for the month ending August 6th, 134 registration statements have been filed for a total of \$165,000,000 of proposed securities issues. A list of the companies filing these statements is given in the report. The names indicate that they are mainly investment companies, although there is a scattering of industrial projects. Comment in some quarters indicates the prospect of considerable difficulty being encountered in complying with the terms of the Act when the time comes for re-financing many large bond issues. Some go so far as to say that unless some of its terms are changed it will be impossible for many large corporations to meet their financial requirements. Pressure is expected to be exerted on the next Congress to that end.

Preferred Stock

Following the recent suggestion of Chairman Jesse H. Jones that banks permit the Reconstruction Finance Corporation to subscribe to preferred stock to the extent of a billion dollars, General Johnson of the N.R.A. has emphatically urged the same thing. The theory of course is that having to pay dividends on this preferred stock would force the banks to get the money working by increasing customers' credit. So far it is a matter for individual banks to decide. Undoubtedly broader credit is needed in the Recovery Program and there is a considerable basis for it without additional funds in the present circumstances when loans in proportion to assets are lower than they have been for some time.

Home Loan Bonds

The Prudential Life Insurance Company is reported to have agreed to accept Home Loan Bank bonds in exchange for loans on property in distress. A movement has been undertaken in Washington to provide an open trading market for these bonds, the interest of which is guaranteed by the Gov-

(Continued on page 32)



At the last statement call:

\$43,281,437.22 in deposits

\$37,128,271.21 in quick assets

FIRST AND MERCHANTS National Bank of Richmond

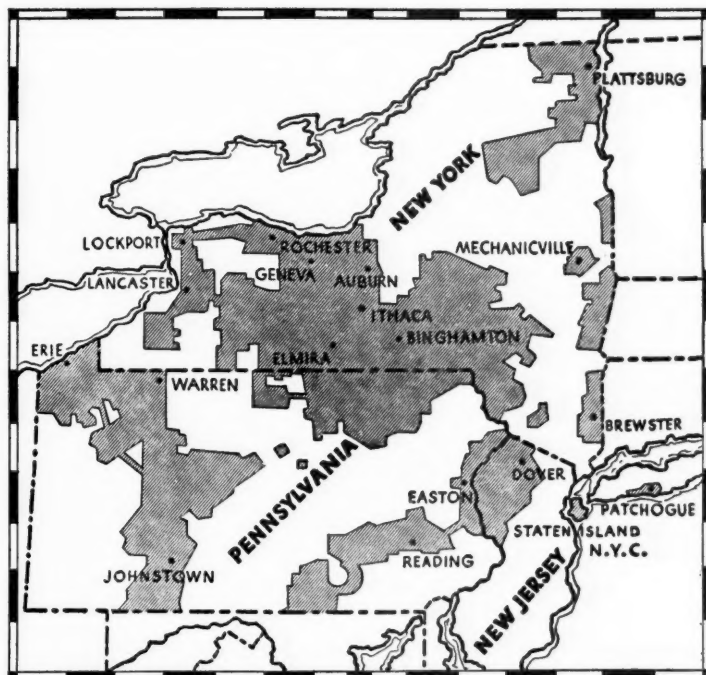
John M. Miller, Jr., President

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LARGEST groupings of Associated Gas and Electric properties are in New York, Pennsylvania, and New Jersey, the heart of the industrial East.

Associated industrial customers include the great shoe and clothing industries of New York; the textile trades of Eastern Pennsylvania; the steel mills and machine shops of Western Pennsylvania.

Industrial users of Associated electric, gas, and other services number 23,520 out of a total of 1,404,800 customers. They are divided among 285 different industries, and are located in 26 States and Canada.



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MORE THAN 200%

**and at the same time actually improved
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We have prepared and printed such a list, which may be had by writing our Cincinnati office.

APPALACHIAN COALS, INC.

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Home Loan Bonds *(Continued from page 30)*

ernment. The details of Home Loan Bank operation in the relief afforded to home owners has been described in these columns. It will undoubtedly add to the effectiveness of the movement to have a free market for the bonds which investors have been shy about accepting because the interest alone has been guaranteed.

Consumer Credit

Arthur J. Morris, founder of the banking system that bears his name, was in Norfolk recently and the Ledger-Despatch quotes him as saying "the final relief from this depression will not be complete until we have organized and stabilized consumer credit as distinguished from productive credit." Many people are of the opinion that the extension of credit to consumers through installment buying agencies is one of the causes of the depression, although the facts about the way these debts have been paid do not bear this out. Consumer credit may be the way through the muddle, but what are we going to do about the mountain of debt that the consumer and the producer and everybody else faces as a reminder of the past?

Farm Loans

The Farm Credit Administration has announced: "With the object of simplifying and speeding up farm debt refinancing, presidents of the 12 Federal Land Banks have agreed to recommend to their boards of directors that the banks accept responsibility for making direct loans to farmers out of the \$200,000,000 fund made available to the Land Bank Commissioner by Congress." There are more than 100,000 applications for loans aggregating \$500,000,000 in the hands of the Land Banks and Commissioner's agents. The force of appraisers of the Land Bank System has been increased from approximately 200 in the early part of May when the Emergency Farm Mortgage Act was passed to 1200 at present and there is an equal number in training for the work. Land Bank loans are first mortgage loans up to one-half the "normal" value of productive farm land, plus 20 per cent of the value of permanent improvements. The Commissioner's loans in amounts of not more than \$5000, are limited to three-fourths of the value of all the farm property and may be used as supplemental loans to reduce other debts and save farms from foreclosure.

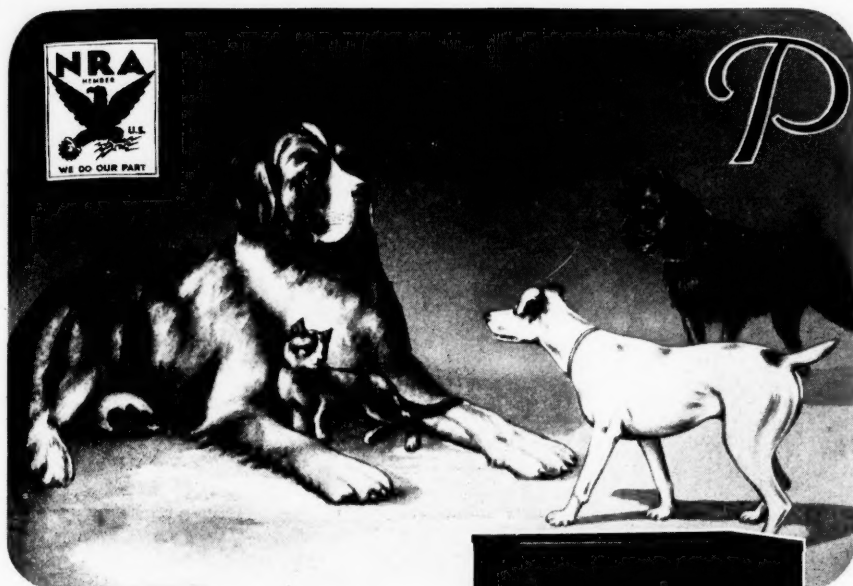
Most Mortgages Exempt

Following the presentation of a brief by the National Association of Real Estate Boards, the Federal Trade Commission, has exempted from the requirements of registration under the Securities Act of 1933 real estate first mortgage securities of a face value of not to exceed \$100,000.

The exemptions are made with specific conditions and requirements attached which become, in themselves, important Federal administrative influence on mortgage practice.

When the Securities Act of 1933 was passed the Association made inquiries to find whether mortgages, mortgage notes and mortgage bonds, which are not specifically mentioned in the Act, would have to be registered, under its provisions. The Association was advised by the Federal Trade Commission that unless exceptions were made by administrative ruling all mortgages would be included under the provisions of the Act.

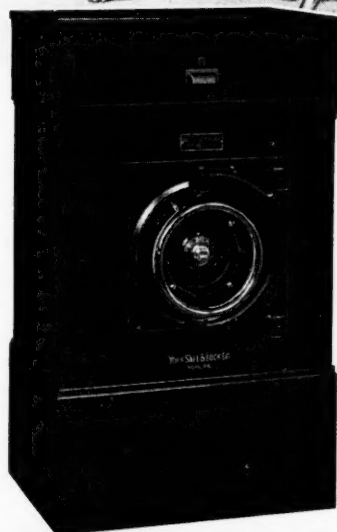
If these exemptions had not been secured, it would have become necessary to register every mortgage in Washington before it could be sold. Henry G. Zander, Sr., Chicago, chairman of the Association's committee on Federal legislation and taxation, points out. This would have meant a tie-up of the whole mortgage business, and would have hopelessly handicapped recovery of real estate activity.



Partners AND PROTECTION

At the left you see a picture study of a timely partnership and a baffled attack. • This study is comparable with the two units of protection pictured—A YORK BANKERS' DAY-RAID CHEST AND A YORK VAULT. • This combination stands unchallenged from the standpoint of perfect protection,—because a York Vault combined with a York Bankers' Day-Raid Chest safeguards your reserve money night and day. Bank bandits know this and will pass your bank up—for they strike only where resistance is weak.

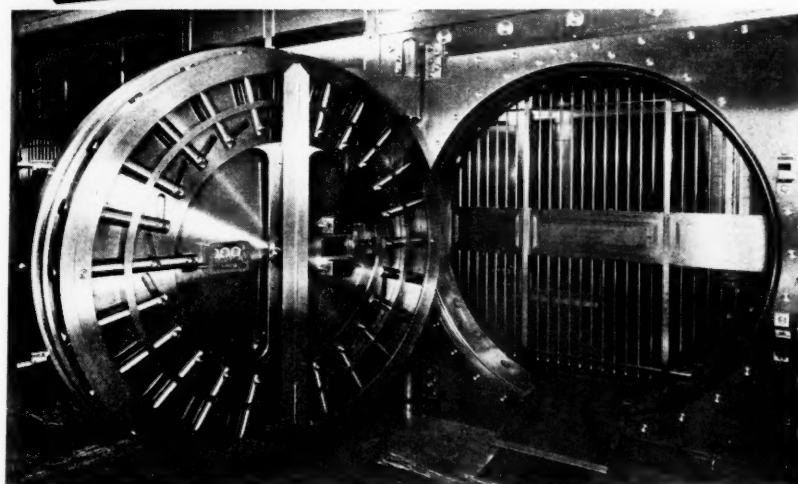
The superiority of York's Inbuilt Protection is immediately recognized in the design and workmanship of the largest and the smallest Burglary and Robbery Resisting devices York Builds.



••• York's record of resistance in actual Burglaries and Robberies is unsurpassed.

••• York's equipment is daily protecting untold billions of cash and securities throughout the world.

••• You can afford York protection regardless of the size of your bank.



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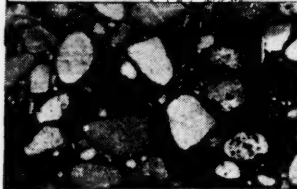
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NEED
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Coarse Aggregate at the Surface Means Wear Resistance . . . and Makes Floors Last Longer

You expect a concrete floor to stand up under any service. *And it will*, if you see that it is properly laid.

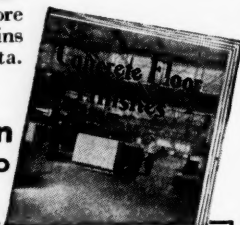
Modern methods of topping assure the right kind of a surface for hard service. And it's just as easy and just as cheap to build a concrete floor right. Modern concrete floors are safe under foot, whether wet or dry, offer least resistance to load movements, cost little to maintain.

To be sure that your next floor is of modern concrete, write today for our valuable guide on Concrete Floor Finishes—it will help you save money.

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ITEMS OF INTEREST

A PUBLIC HEARING ON TEXTILE COSTS would no doubt bring out some interesting facts. The position of the Agricultural Adjustment Administration, as voiced by Mr. Peek, is to learn the extent to which the process tax has caused prices to increase. He cites in a press release that studies in the Department of Agriculture indicate only a small proportion of the cost of a finished product is represented by the amount of the tax.

On the other hand, mills have been closing and there has undoubtedly been a slackening of activity. Manufacturers do not close their plants unless they think they have good reason to do so. One large plant using 25,000 bales must pay \$525,000 in processing taxes. This exceeds the amount of the capitalization of the plant. Some mills are considering a vacation period for their workers as they claim they cannot do business and pay the tax.

THE PETROLEUM INDUSTRY has developed its capital investment from \$500,000,000 in 1914 to \$12,000,000,000 in 1932. Concurrently, the natural-gas industry has grown from the status of an almost unwanted appendage of the oil industry to a self-supporting business of national importance. In 1930, the natural-gas industry is estimated to have expended \$500,000,000 for expansion alone; and in 1932, through its transmission lines (extending 1000 miles or more across the country) it delivered gas valued at \$350,000,000 at points of consumption.

THE PLUMBING AND HEATING INDUSTRY BUREAU says there is a potential market for 9,000,000 additional bathrooms in rural and city homes in the United States. It is of interest to know that twice the number of bathrooms were modernized in the first six months of 1933 as in the first six months of 1932. In considering the most useful expenditure of funds under the Public Works Program, it was pointed out some time ago by Secretary of Labor Perkins, we believe, that in arranging for added conveniences in the millions of homes lacking them throughout the country no more useful work could be done by Government than to advance the money for that purpose. It is understood that preference is being given to loans for public works when asked for by cities for the extension or installation of water and sewerage facilities.

GERMANY, always alert and successful in getting South American business, expects to have the proposed German-South American Air Service inaugurated early in 1934. A reconstructed German steamer will be used as a floating airport in the Atlantic Ocean, midway between Africa and the Northeastern tip of South America. The Canary Islands will probably be included as another stopping station. South American business is of particular interest to our own Southern manufacturing plants and port cities. In an article last month in this publication clear reasons were given for promoting this trade in every reasonable way. It was stated that "despite curtailment in world trade in 1932, twenty Latin-American countries expended \$627,000,000 for foreign goods. The United States supplied \$196,000,000, or 31 per cent of this amount."

MISSISSIPPI is justly proud of the record established by her sales tax. That State, it is understood, has made up a deficit and started a surplus. Other states are considering it as the most equitable and easiest to collect of all taxes. The difficulty of finding new sources of revenue to satisfy the expenses of National Government is likely to increase as time goes on and some of the present burdensome, inequitable

national tax charges should be abolished in favor of the sales tax. It would have the added merit of giving each citizen an increased interest in the affairs of Government.

GREAT BRITAIN is conceded to be an industrial nation. In 1932 there were 646 new factories and 166 factory extensions reported for that country. While this is a good record for a depression year, it is not comparable to what has been done in one section of the United States which has always been considered agricultural rather than industrial. An incomplete survey of the new industries established in the South in 1932 indicated that more than 700 new factories were built, and counting major expansion programs to existing plants, there were in excess of 1000 developments undertaken as contrasted with 812 in Great Britain.

A NEW TYPE OF COTTON which is said to grow approximately 30 per cent more cotton to the acre without increasing the amount of work and fertilizer has been developed by C. G. Rowland, President of the National Bank of South Carolina at Sumter. The idea was evolved by selecting from a cotton field the bolls having five locks. Those were set aside and the seed planted the following year. The same process was repeated for four years until this year Mr. Rowland has sufficient seed of the five lock variety to plant 50 acres.

FOREIGN TRADE showed a marked increase in July. Exports from the United States increased 21 per cent and imports 17 per cent. The Commerce Department reports that these increases were contrary to the usual seasonal trend and represent the third consecutive monthly advance.

ONE SOUTHERN PLANT, the American Enka Rayon near Asheville, doesn't hesitate to spend money for new equipment. It is reported that \$600,000 has been invested this year in new machinery and it is planned to spend \$500,000 in the next 12 months for modernization purposes. Rapid improvement in equipment and methods requires both the cotton and rayon industries to keep their machinery and plants up-to-date.

AN ADVERTISING CONVENTION in London gives ideas to American industry. The Prince of Wales gets a great deal of the credit following his last South American trip of bringing the Britishers to the point of view that advertising pays. It is estimated that Britain now spends 150,000,000 pounds a year for advertising. As a part of the recent Convention, which included an advertising exhibition, 200 exhibitors in a mile long procession marched with banners proclaiming "Advertise for Recovery." The store windows of London were placarded with signs, "It Pays To Advertise." Lord Dewar says "if you do not advertise you fossilize."

BARCLAY'S BANK OF LONDON, in its monthly circular, says the English Government desiring to encourage the manufacture of "home produced motor spirit" will probably grant an additional subsidy or "preference" of 4d. per gallon. This is to apply to light hydrocarbon oils manufactured in England "from indigenous coal shale or peat, or products derived from these substitutes." The circular says:

"In view of the possibilities of the new industry, the provision of Government assistance on the lines proposed can be fully justified. * * * Government assistance to new industries by means of preferential duties has been recognised by eminent economists as a justifiable exception to the doctrine of free trade."

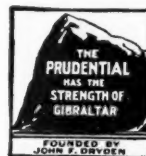
England's abandonment of her traditional free trade policy has been one of the many changes in the economic policy of nations as well as individuals. In England's case the industries which have had protection during recent years have shown progress while those without it have lagged.

"This will be a big help to our people"

That is the prime reason why so many business establishments have taken out Group Insurance.

Those at the head of affairs know that a plan which helps their employees in this way is bound to help their business.

To employers of uninsured groups we will gladly furnish the latest information.



THE PRUDENTIAL
INSURANCE COMPANY OF AMERICA

EDWARD D. DUFFIELD, President
HOME OFFICE, NEWARK, N. J.

INDUSTRIAL NEWS

Modern Lime Plant Opened

The Alabaster Lime Company announces the opening of its modern lime plant at Siluria, Ala., which is an addition to the stone crushing plant the company has operated for the past few years under the name of the Alabaster Stone Company. Shipments may be made of all forms of high grade Alabaster Lime and limestone products.

American Steam Pump Representative

The American Steam Pump Company, Battle Creek, Mich., one of the oldest manufacturers of pumping machinery in the country, recently appointed Harold N. Hill, 701 Walton Building, Atlanta, Ga., to handle American-Marsh pumping equipment throughout Georgia.

Corliss Joins Lewis-Shepard Company

President A. L. Lewis of the Lewis-Shepard Company, Boston, Mass., manufacturers of jacklifts, stackers, skid platforms and racks, announces the appointment of George H. Corliss as sales promotion and advertising manager, to merchandise their complete line of factory and warehouse material handling equipment. He has had a wide marketing experience and has written many articles on marketing, merchandising, sales promotion and advertising.

TracTracTors in Reforestation Work

The United States Government through the Forest Service of the Department of Agriculture and of the Department of the Interior recently purchased from the International Harvester Company of America, Inc., Chicago, more than 100 McCormick-Deering TA-40 TracTracTors for use by the Civilian Conservation Corps in reforestation work.

Superheat Company Appointment

The Superheater Company, New York City, has appointed William T. Conlon manager of its Industrial Department, in charge of the design, manufacture and sale of Elesco superheaters for all types and makes of boilers for public utility and industrial power plants. Other products of this department include desuperheaters, resuperheaters, furnace water walls and miscellaneous heat exchange apparatus for power plants and process industries.

Engine Frame for High Speed Train

Lukenweld, Inc., a division of Lukens Steel Company, Coatesville, Pa., has been awarded contract by the Winton Engine Corporation, Cleveland, Ohio, for the manufacture, in arc welded rolled steel construction, of the complete engine structure for a 600 H. P. Winton engine. It will power the new lightweight passenger train of the Union Pacific System which is expected to make 110 miles an hour.

Reading Iron Company Appointment

The Reading Iron Company, Philadelphia, Pa., announces the appointment of William Craig Wolfe as vice president in charge of sales. Mr. Wolfe has had wide experience in marketing iron products and was a moving factor in the organization of the Wrought Iron Manufacturers' Association.

Liquidating Veneer Plant

N. B. Payne, machinery distributor and industrial property adaptor, 105 West 55th street, New York, is liquidating the veneer machinery of the Astoria Importing and Manufacturing Company's plant, comprising a large lot of heavy woodworking machinery, power plant, derricks, cranes and hoists, all on New York waterfront.

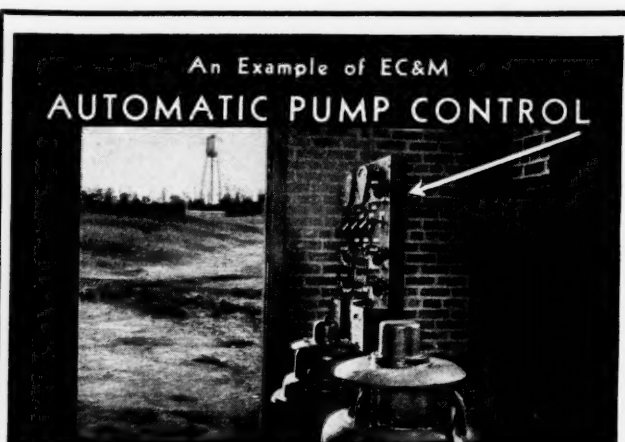
Homestead Valve Appointment

The Homestead Valve Manufacturing Company, Inc., Coraopolis, Pa., announces the appointment of the F. J. Evans Engineering Company, 1305 Watts Building, Birmingham, Ala., as exclusive representative in Alabama for the sale of "Hypressure Jenny", vapor spray machine for automotive, industrial, aeronautical and building cleaning.

Combustion Engineering Reorganized

The Combustion Engineering Company, Inc., New York, has taken over the properties of International Combustion Engineering Corporation and affiliated companies recently sold by order of the Federal Court. Properties include those of Combustion Engineering Company, Hedges-Walsh-Weidner Company, Coshoccon Iron Company and Raymond Bros. Impact Pulverizer Company. The new company will continue Combustion Engineering Corporation's complete line of

Continued on page 38



From Deep Well to Clear Well to Elevated Tank automatically

Clear Well is 7 ft. Deep
1st Deep Well Pump starts at 6 feet
2nd " " " " " 5½ feet
1st Booster Pump starts at 250 feet
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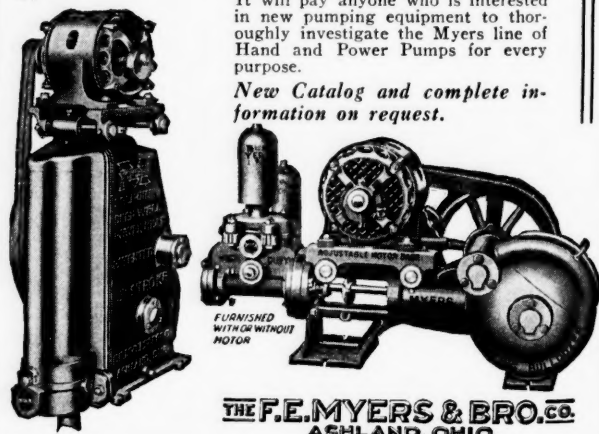
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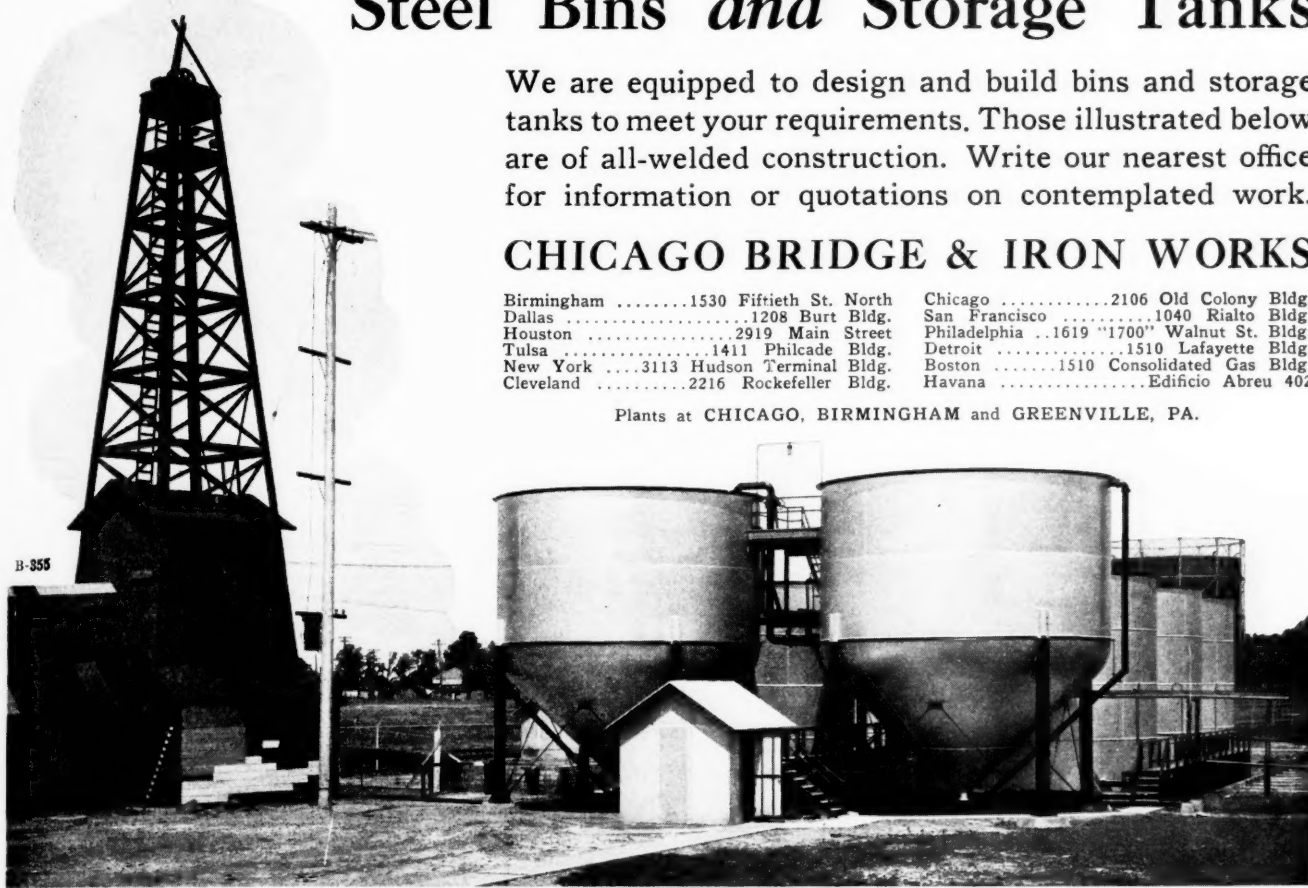
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We are equipped to design and build bins and storage tanks to meet your requirements. Those illustrated below are of all-welded construction. Write our nearest office for information or quotations on contemplated work.

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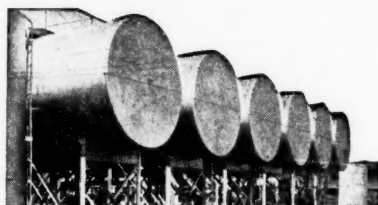
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| Birmingham | 1530 Fiftieth St. North | Chicago | 2106 Old Colony Bldg. |
| Dallas | 1208 Burt Bldg. | San Francisco | 1040 Rialto Bldg. |
| Houston | 2919 Main Street | Philadelphia | 1619 "1700" Walnut St. Bldg. |
| Tulsa | 1411 Philcade Bldg. | Detroit | 1510 Lafayette Bldg. |
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SOUTHLAND PRODUCTS

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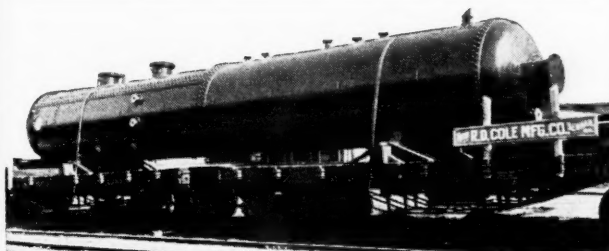
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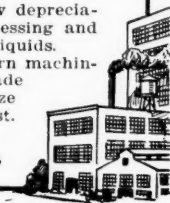
DAVIS CYPRESS TANKS

Some especially desirable attributes must surround Davis Tanks—when you realize that leading manufacturers and railroads of the South have bought them repeatedly for 42 years. In truth, there are two reasons:

1. Cypress is unequalled for durability, low depreciation and varied usefulness in storage, processing and handling chemicals and other liquids.

2. Davis tanks, built by modern machinery and skilled men, can be made to fit any factory need, in any size and shape. Catalog on request.

G. M. DAVIS & SON
P. O. Box 5, Palatka, Florida



Combustion Engineering Reorganized

(Continued from page 36)

fuel burning, steam generating and related equipment, including all types of stokers, pulverized fuel systems and boilers, as well as water-cooled furnaces, economizers, air preheaters, ash conveyors and hoppers.

Semet-Solvay Installations

Recent installations of the Semet-Solvay ignition arch process for carbureting water gas with heavy oil and gas oil have been made in a number of New England and Southern plants. Among the installations are those for the Jacksonville (Fla.) Gas Company; Florida Power and Light Company, at Miami; and St. Augustine Gas and Electric Company.

Steel Barrels for Beer

The Murray Corporation's recent announcement of the production of a steel insulated "quarter" barrel as a companion to the "half" barrel for the brewing industry is interesting evidence of the flexibility of metal fabricating plants, particularly the larger shops which have been geared to the production of automobile parts and bodies. The Lincoln Electric Company of Cleveland has supplied the Murray Corporation with more than \$100,000 worth of welding machinery for barrel production since the legalization of beer.

Koehring Wheel Dumptor.—The National Equipment Corporation, Milwaukee, Wis., has issued a bulletin devoted to the Koehring Wheel Dumptor, which is available to those interested in dirt-moving work.

Steel in House Construction.—The United States Steel Corporation, New York City, has issued a 56-page booklet on "Steel Framing For Small Residences," to provide architects, builders and fabricators with convenient information on the safe, practical and economic use of steel in the framework of small residences.

Crushing Machinery.—The Traylor Engineering and Manufacturing Company, Allentown, Pa., recently issued "The Traylorian." Equipment illustrated and described in the publication include huge crushing rolls, Bulldog Jaw Crusher, Type T Bulldog Gyratory Crushers, and Type TZ Gyratory Crusher.

Data Book on Valves.—Catalog No. 23 of 264 pages issued by Jenkins Bros., New York City, presents information on valves and valve layout, covering not only 400 Jenkins valves, in a wide range of types and patterns, but giving details of design and construction, metals used in making the valves, engineering data, etc.

Tennessee Valley Map.—A shippers and tourist map and guide of the Tennessee Valley showing railroads, highways and existing and proposed developments has been prepared by Rudolph Shutting, Chattanooga, Tenn. Price 60 cents.

"Pushing Ahead."—Allis-Chalmers Tractor Division, Milwaukee, Wis., is distributing the "Pushing Ahead" issue of its **Feature Of The Month** magazine for the dealer and his salesmen, listing uses of Bulldozers for Allis-Chalmers Tractors, and presenting articles on "Pushing Ahead" and on New Roadbuilding Equipment.

Littleford Equipment.—Littleford Bros., Cincinnati, Ohio, recently issued Bulletin 1-3 illustrating and describing Littleford Highway Equipment, including tool heaters, surface heaters, reheating pans, construction kettles, squeegee carts, tools and pots.

MORIBUND SECURITIES AND CORPORATIONS

A new handbook for Executors, Trustees, etc., defaults, receiverships and bond holders' committees, also ratings of old railroad paper; mailed postpaid, cash with order.

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**Get the RIGHT GRADES
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MODERNIZE PUBLIC PROPERTY

UNDER the public works program new Federal, State and local projects have received the greatest attention. However, the modernization of public properties suggests thousands of projects that could be undertaken with good results toward increasing efficiency and lowering operating costs. Repairing and renovating of school buildings and other public structures to increase the safety factor and prevent the loss of life and damage from fires are well worthy of consideration by the Government.

Modernization of mechanical equipment in existing public properties is urged by Russell Grinnell, president of the Grinnell Company, of Providence, R. I., who points out that this form of expenditure assures a high labor cost to total cost and further promises self-liquidation in a comparatively short period of time.

In reviewing the possibilities in the field of modernizing mechanical equipment in heating power, plumbing, electrical and allied plants, Mr. Grinnell suggests that surveys be made of each public property to determine where replacement or improvement could be made on a self-liquidating basis. Federal, State and city engineers and officials are in a position to make recommendations immediately regarding many of these specific projects so that work could get under way at once, and others follow at a near future date, Mr. Grinnell believes.

Among the suggested projects are the following, briefly summarized:

- Installation of central heating plants for groups of public buildings which now are heated by separate boilers.

- Zoned automatic control of heating plants for large office buildings.

- Power generating equipment installation.

- Modernization of piping where upkeep is excessive.

- Replacement of obsolete heating equipment with modern heaters or air conditioners.

- Insulation for fuel saving.

- Installation of modern boiler equipment, elevator machinery, compressors, etc.

In summarizing the benefits calculated to accrue from the adoption of such a program Mr. Grinnell holds: That money can be spent for mechanical equipment in a manner which will be quickly self-

liquidating; that work will be provided for many so-called "white collar" men; that work of this nature provides a large proportion of direct labor, and that without adding to productive capacity such projects eliminate waste.

Many cities are making progress toward modernization of their "municipal plant." As an illustration of what can be accomplished in this direction are cited the following projects.

Bernard L. Crozier, Chief Engineer, Department of Public Works of the City of Baltimore, states that in the program submitted to Mayor Howard W. Jackson last June, there were included:

- "Extensive improvements at Baltimore City Hospitals consisting of the completion of the General Hospitals Building, additions to Ward A and a Tuberculosis Ward. In addition to this a new Power House has been contracted for and plans are being prepared for remodeling the old steam line tunnel, the installation of a new water supply with the necessary pumps, lines, tanks and fire protection, and a generation system with the necessary equipment, cooling reservoir, conduits, wires, etc.

- "At the Back River Sewerage Works we propose to construct a gas holder and sludge digestion tanks as we feel that these are essential to the operation of a modern treatment works.

- "A new pumping station with pumps and equipment is proposed by the Water Engineer in Hanlon Park and it is also planned to line and cover the Melvin Avenue Reservoir in accordance with the recommendations of the State Board of Health. The construction of a permanent chlorinating station at Druid Lake and the covering of the clear water basins at Montebello Filters are also in the program.

- "Provision has been made for the construction of four new school houses as well as the erection of additions to existing schools in order to replace portable structures which are in temporary use where the capacity of the permanent structures is insufficient."

Gordon P. Fought, Manager-Mayor, City of Wheeling, W. Va., writes that:

- "We have several projects under consideration in the Recovery movement and will be in a position to submit them to our State Engineer in the next few days.

- "The most important of which is our Sewer and Disposal Plant including an Incinerator, which, if it goes through will mean approximately a \$3,000,000 project."

R. E. L. Chancey, Mayor of Tampa, Fla., calling attention to a \$104,000 appropriation for its Bureau of Streets for the fiscal year ending May 31, 1934, states:

- "The City of Tampa is preparing an application to be made to the Federal

Government for a loan aggregating about \$7,000,000 for the purpose of installing a modern sewerage disposal plant. If the application is approved, it is the purpose of the City Government to submit to the people the question of the desirability of installing a sewerage system at this time. It is contemplated that, if such a system is installed, 70 per cent of the cost which the City would be required to borrow from the Federal Government would be retired through the issuance of sewage revenue bonds, and that the sewage system shall be operated on the basis of a service charge on the same principle as though it were a public utility."

William D. Tynes

Birmingham and the South lost a useful citizen in the passing on August 19th of William D. Tynes, head of the Hardie-Tynes Manufacturing Company. For 35 years, Mr. Tynes had been engaged in manufacturing in Birmingham and after the death of his partner, William Hardie, became the leading spirit of one of Birmingham's outstanding industries. His close touch with the affairs of his business and his driving force in putting everything with which he was interested to the front was traditional. It was impossible to form the acquaintance of Mr. Tynes without recognizing that he was a man, who by his originality and farseeing judgment, paused at no obstacles in carrying forward the ideals and accomplishments of a business in which his heart and soul were so closely engaged.

His interest in National affairs presented from an extremely original viewpoint provided always food for thought for everyone meeting him. He was a believer in the South and its ability to turn out goods equal to the best in the Nation. As a result, his company had opened offices in Northern cities and offered successful competition with its products in territories that would not ordinarily be considered in their field. One of the most recent accomplishments of his firm was the building of helium compressors for the United States Government for use in dirigible inflation. These had passed the most exacting tests only a few months ago and were recognized as a complete success.

During the entire period of the depression Mr. Tynes, who knew every detail of his business, was concerned about providing work for his employees. As a result, his activities led him to devise ways and means for accomplishing this and the record of the activity of his plant throughout the dull period was unusual. While a man of far vision, he recognized the necessity for exactness and gave unremittingly to the details of his chosen task. His influence will be long felt and will prove a guide in the years to come.

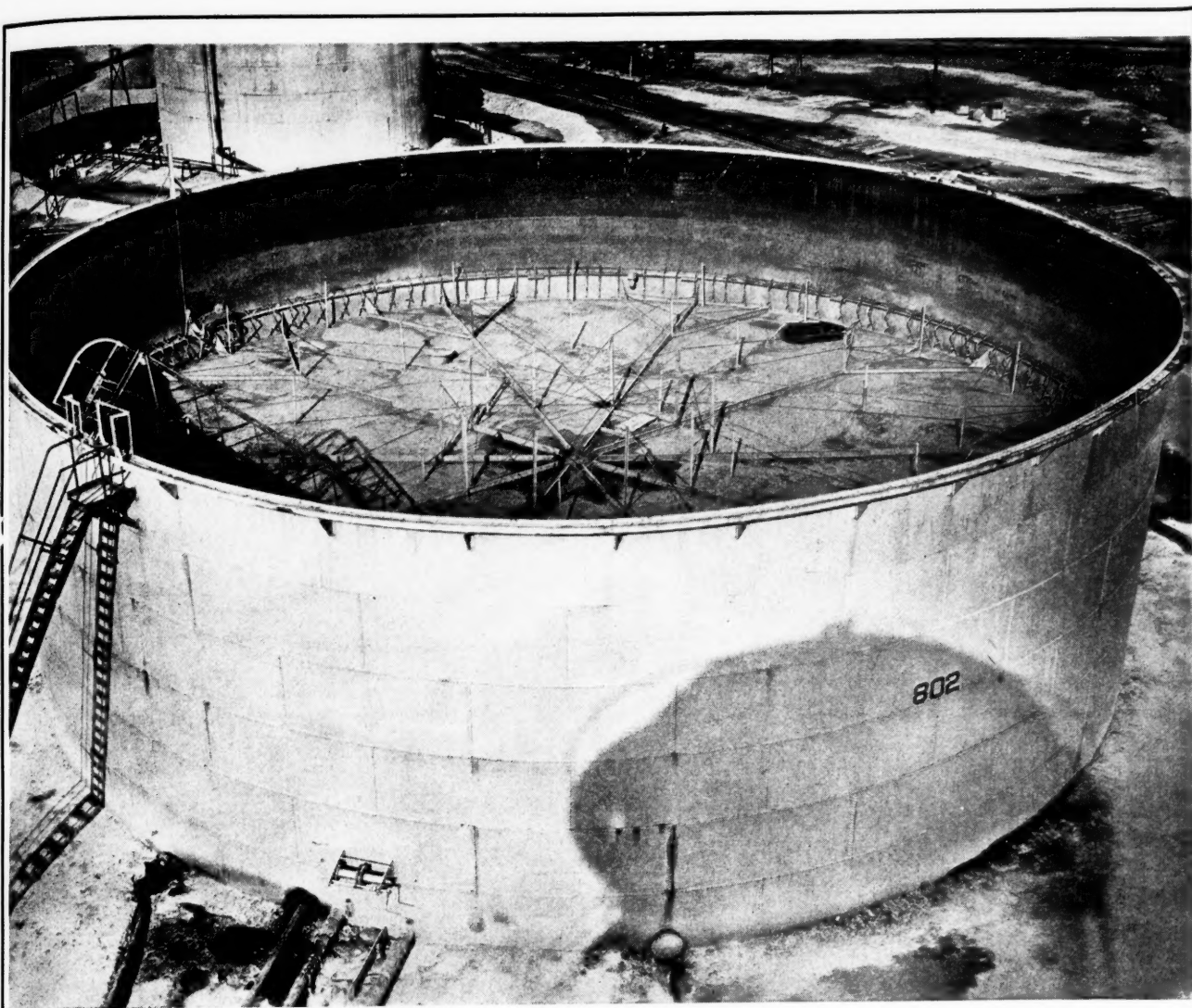
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OIL men almost unanimously agree that the floating top type of gasoline storage tank is most effective in protecting gasoline against evaporation. It is this type of tank which we show in the above photograph. Gulf Gasoline is being protected here.



And Gulf Gasoline is protected and checked through every operation—from the time the crude oil is taken out of the ground, transported, refined, stored until it is sold to the general public. Perhaps this will help you to understand better why Gulf Gasoline (like all Gulf Products) is always uniform—uniformly high in quality.

GULF REFINING COMPANY

REMOVE BARRIERS TO PROGRESS

By
Carl R. Cunningham
Atlanta, Ga.

WE have noted the editorial comment on page 16 of the August issue of the MANUFACTURERS RECORD relative to the inability of Southern manufacturers to market their product in competition with the North if production costs are equal, because of the higher freight rate for the longer hauls. Of particular interest was the statement referring to the inadequate wage differential allowed the South under the N.R.A. codes in which you pointed out that:

"Of what benefit will it be to Southern labor if in the equalization of wages Southern labor finds its employers cannot meet competition of Northern producers due to the higher freight rates for the longer hauls."

Under the existing situation the Southern manufacturers not only are at a disadvantage because of the longer distance and greater time in transit, but the policy of the railroads and the Interstate Commerce Commission has been to place an additional penalty charge against the South in the form of higher freight rates per mile than from competitive producing points in other territories. This has been the result of making rates relatively higher as the density of traffic is less, but the effect of such a policy is obviously to further diminish the traffic in the territories where the highest rates are charged and to concentrate industries and increase the traffic near the large consuming markets, and in the territories where the preferred rates are available. With equality of rates with those charged for equal distance from competitive manufacturers in the North, the South would still be at a disadvantage because of greater distance from the principal consuming markets. Since progress is being made in efforts to equalize the production cost and take away from the Southern manufacturers any opportunity to absorb the freight rate differential by a saving in labor cost, etc., it is very important for the future industrial and economic welfare of the South that the freight rate discrimination against this territory be removed.

As we have pointed out before, this

deals with a matter of vital importance to the development of the Southern section of the country, both from the standpoint of decentralizing industry now concentrated largely in the congested Eastern centers, and in the betterment of the economic condition of the Southern section of the country by permitting the distribution of manufactured products from this territory at rates properly related to, and substantially equal to, those from competitive Eastern manufacturing points.

The existing policy of giving great weight to the matter of traffic density in determining the relative levels of freight rates has caused the railroads and the Interstate Commerce Commission to establish or maintain rates within, to or from the Southern and Western States on a level materially higher than on like descriptions of traffic in the Northeastern States. Since this relatively higher level of freight rates restricts the volume of traffic and retards the development of industry in competition with States where the transportation costs do not include such differential or penalty charge, the effect is to create a vicious circle.

So long as these conditions continue, industries located in the South can ship their manufactured product to the large consuming markets in the Northern section of the country only to the extent that they may be able to offset the difference in transportation charges by cutting their production costs. This is detrimental to the economic welfare of the Southern States. Where the freight rate disparity cannot be overcome by a difference in production costs to enable the Southern industries to distribute their manufactured products in competitive markets, the relative traffic density in the South becomes still less than in the Northeastern States. The use of such smaller traffic density as a reason for applying still higher rates in the South continues the vicious circle and is a handicap to efforts now being made to decentralize industry.

The policy of waiting for the volume of freight traffic in the South to increase to the same volume as in the Northeast before providing for an equalization of freight rates, is obviously wrong in principle and retards the development of this section and the movement of traffic therein. Experience has proven that this policy has failed to produce adequate transportation revenue for the railroads in the Southern and Western districts.

The Question of Basic Freight Rates and Their Relation to Southern Development Is Worthy of Consideration at This Time. Mr. Cunningham, the Writer of This Article, Is Manager of the Traffic Department Representing the American Cotton Manufacturers Association, North Carolina Cotton Manufacturers Association, and the Cotton Manufacturers Association of South Carolina. The Board of Governors of the Traffic Department Includes the Following Leaders in the Southern Textile Industry:

E. A. SMYTH, *Chairman*,
Balfour, N. C.
V. M. MONTGOMERY, *Treasurer*
Spartanburg, S. C.
W. E. BEATTIE,
Greenville, S. C.
F. J. HAYWOOD,
Kannapolis, N. C.
JULIUS W. CONE,
Greensboro, N. C.
THOMAS H. WEBB,
Concord, N. C.

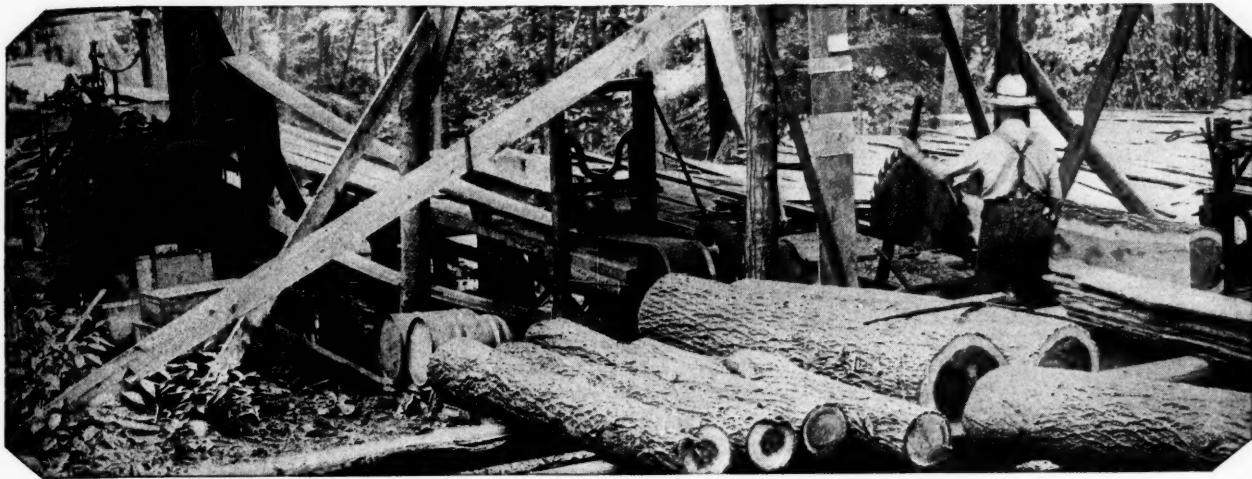
It is in conflict with the principles underlying the Union of the States and the formation of a constitution designed to prevent tax or tariff walls or barriers that would interfere with the interchange of commerce between the various States without preference, prejudice, or discrimination compared with the interchange of like commerce between other States. It does not conform to the declared policy of the Congress embraced in Public Resolution 46—68th Congress (Hoch-Smith Resolution), to the effect that due regard should be given to a natural and proper development of the country as a whole.

The disparity in freight rate levels should be removed so that the Southern and Western sections of the country may be built up by the location of industries on the railroads in these States with the assurance that there will be no penalty against the distribution of their manufactured product in competition with manufacturers in the Northeastern States. This will contribute to the revenues of the Southern and Western rail carriers the enormous volume of traffic when the freight rate disparity is removed to permit the development of the country as a whole and the decentralization of industry now concentrated largely in the Northeastern States.

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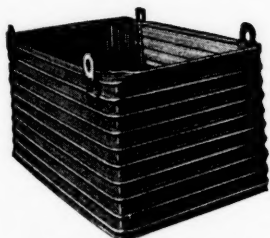


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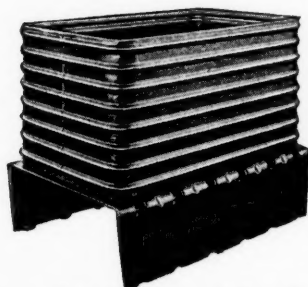
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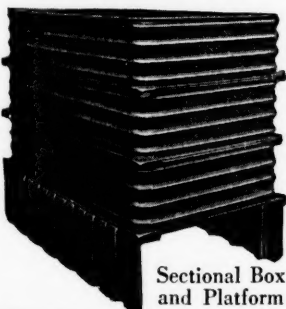
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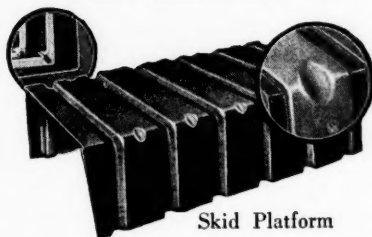
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THE NAVAL STORES INDUSTRY

By

A. Stuart Campbell

AN industry which has long been important in a number of the Southern States, is the naval stores industry. In 1929, the last year for which government figures are available, there were 1,183 naval stores establishments, employing 40,157 wage-earners, paying them \$15,036,175 annually in wages, and turning out a product valued at \$36,281,632.

The importance of the industry is not confined to the products alone, but extends to the indirect benefits. The production of naval stores helps the transportation industries by furnishing tonnage for the railroads, the motor transportation companies, and the steamship lines. Also, because of this tonnage, the transportation companies can offer low rates and efficient service for other commodities, whose producers thus benefit from the industry. Likewise, producers and distributors of naval stores equipment, clothing, food, and other essentials required by the workers in the industry, have benefited by its existence. Merchants and businesses of all kinds in prosperous naval stores communities have enjoyed the increased prosperity brought by the industry.

The two leading States in naval stores production are Georgia and Florida. In the year ending April 1, 1932, Georgia produced 51 per cent and Florida 34 per cent of the total naval stores in our country. Alabama produced 5 per cent of the total, and Mississippi, Louisiana and Texas, together, 5½ per cent. In this same year the United States produced 65½ per cent of the total production in the world, while France, the second largest producing country, turned out 17 per cent. Spain produced 7½ per cent, Russia, 3 per cent, and Portugal, 2½ per cent, while Greece, India and Mexico produced smaller quantities.

Production of naval stores began in America in 1606, in Nova Scotia; was continued in 1608 in Virginia; and in 1620 in New England. There was an insufficient supply of pine in these sections, and in 1665 operations were started in North Carolina, where the industry thrived so that this State was called the "Tar-Heel" State. For 215 years the Carolinas dominated the industry, then,

Dr. Campbell is Director of the Bureau of Economic and Business Research, University of Florida, Gainesville, which has included in its activities during the past year, economic studies of the naval stores industry and the possibility for expanding paper making in the South. In this article, he summarizes some of the essential facts developed by the intensive investigation in the field of turpentine and rosin production and distribution. Improved methods, greater advertising, and chemical research and investigation of new uses of forest products are suggested. An article on the paper making possibilities of the South, by Dr. Campbell, is to appear in a subsequent issue of the *Manufacturers Record*.

shortly after 1880, the supply of pine timber grew scarce in these States, and the leadership passed to Georgia, with its seemingly inexhaustible pine areas. Georgia retained its lead until 1905, when Florida, with a greater supply of virgin pine timber, surpassed it. Florida was the leading producing State until 1923. Then, forest fires and unsound tax laws caused it to lag behind Georgia, which has increased its lead each year to the present time.

The export trade in naval stores has always been important, 67 per cent of our output being exported in the year ending in 1932. The European countries have been the best markets for our naval stores, taking 79 per cent of the turpentine and 58 per cent of the rosin exported from the United States in 1931. The leading European markets are Great Britain, Germany and the Netherlands. Canada is our next best customer, followed by Japan. Then come two South American countries, Argentina and Brazil. Exports of naval stores have declined in recent years.

Turpentine and rosin are used chiefly for industrial purposes. The principle use of turpentine is in paints and varnishes. 81 per cent of the total consumption being used for this purpose in 1930. Turpentine make a better thinner for paint than certain mineral oils, but because these are cheaper, the paint manufacturers and users prefer them. Shoe polish and leather dressing required 10½ per cent of our total turpen-

tine consumption in 1930, while other uses are relatively unimportant.

The principal use for rosin is in the manufacture of paper and paper sizing, this taking 37½ per cent of the total consumption in 1930. With the development of paper manufacture in the far south, this use of rosin should increase substantially. The next most important use for rosin is in the manufacture of soap, which took 24 per cent of the total consumption in 1930. Varnish requires the next largest amount of rosin, taking 21 per cent in this year. There are other industrial uses, which are less important than the three mentioned.

At the present time there is an oversupply of turpentine and rosin, in spite of the fact that production this past year was the smallest since 1906, with the exception of one year. With a revival of industrial activity, it is hoped that the market for these products will expand.

There is so much land in the far Southern States that is sub-marginal for agriculture, and suitable only for the growing of trees, that unless forest industries are encouraged, there will be no permanent prosperity in these areas. Hence, it is imperative that the naval stores industry, as one of the most basic of the forest industries, be encouraged.

Needs of the industry at the present time include improvement in operating methods, which are not as efficient as they should be. Too small trees are being worked; the chipping of the trees is done in an unscientific manner; there is too much waste of gum; the product is not free from impurities; the distilling is by rule-of-thumb; etc. Marketing methods and financial facilities for the operators could be improved. Two middlemen, a factor who acts as banker and also as sales agent for the operator, and a dealer, who is a wholesale distributor of the product, are used in the industry. This use of two middlemen adds somewhat to the distribution costs.

As an important improvement in production methods, the central still seems destined to play its part. By the central still is meant one large still for the entire output of a producer, instead of several small ones, or a large still to serve all the producers within a given area. These large stills are better constructed and equipped, and turn out a higher quality product than the small ones. Then, the output of a central still serving an extensive territory might be large enough to permit of direct distribution and possibly financing arrangements, with resulting advantages to the operators.

One of the most important needs of the naval stores industry is a comprehensive and extensive advertising campaign, to acquaint possible buyers with the various uses of turpentine and rosin.

(Continued on page 46)

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The Naval Stores Industry (Continued from Page 41)

No concerted effort has ever been made to do this. Users of paint, for instance, might be interested in knowing that, because of the greater resistance of turpentine to usage and the weather, paint mixed with turpentine will last much longer than that mixed with mineral oils.

Another important need of the industry is more chemical research and investigation of new uses of turpentine and rosin. One important discovery might revolutionize the industry. Then, there are various minor improvements that could be made, such as better packaging of the product, including small-sized turpentine containers for the retail trade.

Scientific reforestation, to permit of long time operations, should be carried out, if the industry is to endure permanently. However, before this could be done in several of the producing States, Florida being an outstanding example, tax revision would be necessary.

Finally, there should be greater co-operation between the various operators, factors and dealers connected with the industry.

Diebold Protection Equipment

Ultra modern forms of record and cash protection equipment are featured at the Century of Progress Exposition, Chicago, in the display of the Diebold Safe and Lock Company, Canton, Ohio, one of the world's largest manufacturers of vaults, safes, and other fireproof and burglar-proof equipment. Among these forms of modern protection are the Electric Rekordesk Safes, Ledger Tray Safes, Receding Door Safes, Cashguards, Delayed Control Locks, and Tellers' Safety Lockers.

Machine-Made Realism

Ingenious applications of machinery and mechanical devices in the many exhibits at the Century of Progress Exposition are constantly a source of wonder to those who want to see "what makes the wheels go 'round.'" Realism, brought to the nth degree by motive, lighting and sound effects, is strikingly effective in the animated recreated prehistoric monsters some of which are 60 feet long. Made of steel, papier mache, sponge rubber, gears, flexible shafts and electric motors, the lifelike animals move, "breathe, fight and play," as authorities believe they acted in their native habitat. The building in which they are housed is a huge hemispherical dome, constructed by the B-W Construction Co., inside of which an 80 foot diameter conveyor, built by the Stephens-Adams Mfg. Co., Aurora, Ill., carries visitors around the exhibit of life-sized animated figures of prehistoric men and animals.

"New Deal" for Railroads

A clear and concise review of the railroad situation is presented by the Kansas City Southern Railway in the following:

With the National Recovery program, regulation that has applied to the railroad industry for many years has been extended, in perhaps a modified form, to manufacturers and shopkeepers. This extension of governmental regulation should result in a broader general insight into the problems of rail lines. The new legislation simply sets minimum wages and maximum hours. Railroads have long been subject to regulation in the matter of accounting methods and hours of service in certain branches of employment, as well as being told how much they might charge for their services. In fact, nearly every detail of railroad operation is under the strictest governmental supervision.

Since the Interstate Commerce Commission controls rail rates, the natural result has been that trade and shippers' organizations have kept hammering at that body for freight rate reductions. On one or two occasions, the carriers have been granted the privilege of increasing rates, but these increases have shortly been nullified by reductions on one commodity after another.

In the recently enacted Emergency Railroad Transportation Act, the government has gone further into railroad regulation. This new step has apparently awakened in the Federal agencies a more sympathetic view of the problems confronting the carriers. One indication of this change of heart is seen in the refusal of the Interstate Commerce Commission to grant the latest request of various farm and shippers' groups for reduced rates.

The Commission found that the general level of freight rates (excluding emergency charges which expire Sept. 30, 1933) is more than 20 per cent below that of 1920 and more than 10 per cent below that immediately following the reduced rates of 1922. It held that freight rates are not depressing the volume of business, although the net revenues of railroads for 1932 were shown to be the lowest in many years, being only half that of 1921, a depression year. The Commission stated that, after allowing for the recent upturn in traffic, if rates were lowered as much as 10 per cent, the net revenues would shortly fail to meet fixed charges. In its decision, the Commission stated: "The preservation of an adequate railroad transportation machine is more important to the country than lowered freight rates" and "that general rate reductions, by still further lowering the revenues of the rail carriers, would threaten the continuance of adequate railroad service and, by preventing maintenance and other work, would tend to increase unemployment."

All this would indicate that Uncle Sam's further entry into the railroad business has resulted in a closer audit of the profit and loss account and made him understand just why so many figures appear in red ink.

Perfects Radio Transmission

Every improvement known to recent radio art has been incorporated in the new transmitting tower of the high-powered 10,000 watt broadcasting station of WBAL, Baltimore. In relocating its transmitting station 12 miles closer to the city, a high capacity crown is an original feature of the installation. This unique development, which is being used for the first time in this country, was designed by Chief Engineer G. W. Cooke in WBAL's own research laboratory. It tops the vertical radiator of a vertical antenna system of the most efficient type.

In announcing this 1933 achievement, Director Frederick R. Huber, says the station's transmission has been improved 200 per cent and is to serve the primary aim of WBAL to give the radio public and sponsors the best both in transmission and programs.

Another feature of the new transmitting station are the wooden masts which are the first built in the United States. The supporting structure for the antenna conductor is 200 feet high and required a large amount of original work to insure mechanical strength and electrical efficiency. They are built of square wood timbers all of which are 20 feet long, four timbers arranged to form a square 24-inches cross section at the base of the mast and a 20-inch cross section at the top 200 feet from the ground. The timbers are cross bolted and the joints staggered with the result that quite a rigid structure has been secured. Steel guys pulling four ways are arranged in three sets up the pole to hold it erect. These guys are isolated into 25-foot sections by porcelain insulators to eliminate absorption of the radiation.

The antenna consists of a $\frac{3}{4}$ inch copper tube carried vertically up the mast by large stand-off insulators to a height of 150 feet. At this point there are four wires connected which extend up the remaining 50 feet to two 20-foot cross arms at the 200-foot elevation. At the end of each cross arm there is a large copper arch 20 feet in diameter connected to the antenna to form the high capacity crown to the vertical radiator. The high capacity crown, plus the vertical radiator and the use of wooden masts increases the efficiency of WBAL.

Because of possible interference to air travel, the masts have been colored in alternate black and orange stripes, and for night flying, a large rotating beacon throws a 4,000,000 candlepower red beam around the vicinity of the antenna and transmitting station.

Tung Oil.—The State Department of Agriculture, J. C. Holton, Commissioner, Jackson, Miss., has issued Bulletin No. 1, on "Tung Oil—Mississippi's New Agricultural Industry."

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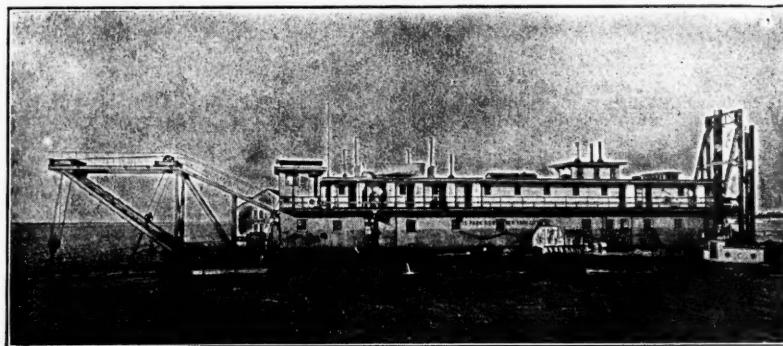
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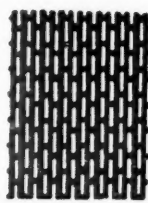
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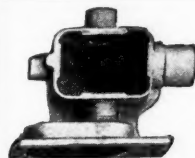
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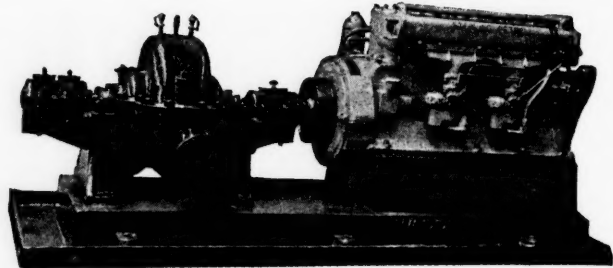
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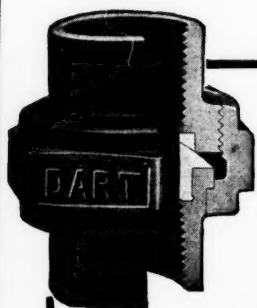
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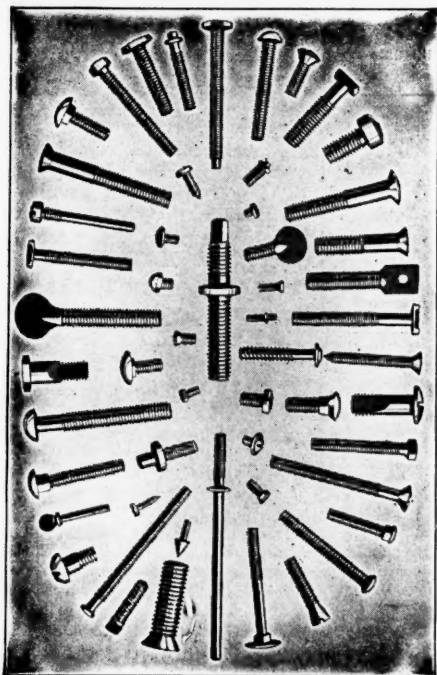
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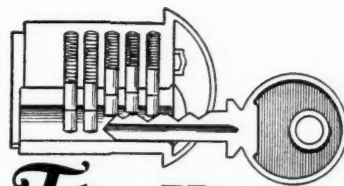
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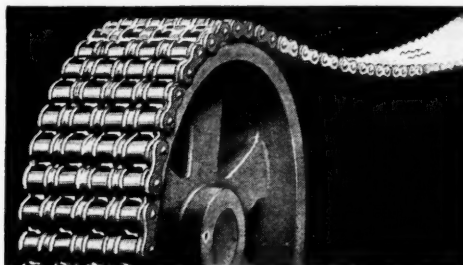
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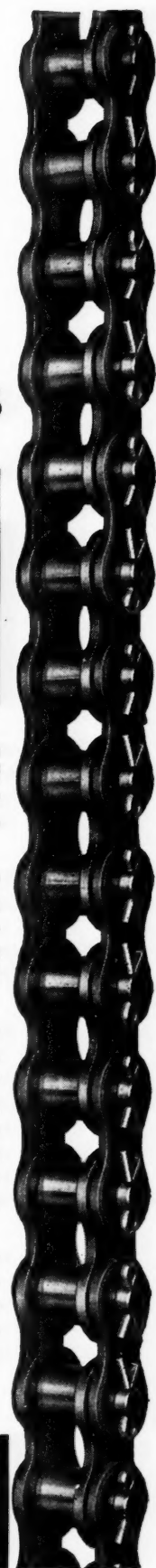
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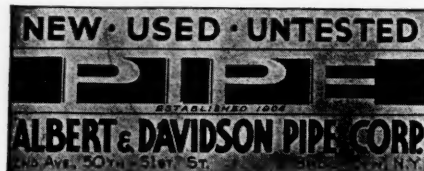
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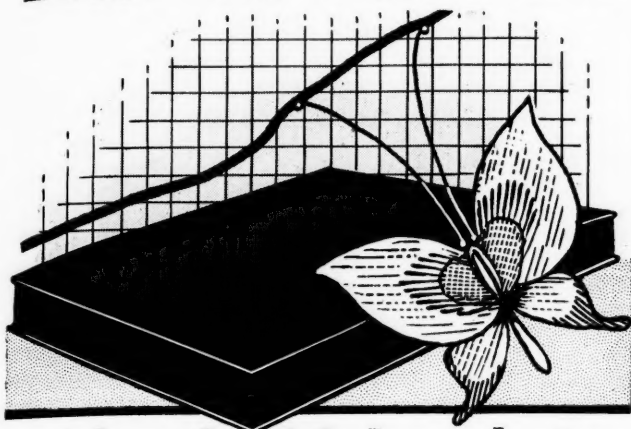
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INDEX FOR BUYERS

Numbers Indicate Pages Where Products Can Be Found

| | | | |
|-----------------------------------|--------------------|----------------------------------|--------------------|
| Accountants | 57 | Limestone (Crushed) | 48 |
| Architects | 57 | Locomotives | 9 |
| Attorneys (Patent) | 57 | Lumber (Creosoted) | 45 |
| Boilers | 50, 52, 53, 54, 56 | Machinery (New & 2nd Hand) | 52, 53, 54, 56 |
| Boxes (Paper) | 53 | Marble | 45 |
| Boxes (Shop and Factory) | 43 | Perforated Metal | 49 |
| Brick | 49 | Piling, Poles, etc. (Creosoted) | 45 |
| Brick Machinery | 50 | Pipe (Cast Iron) | 6, 27, 49 |
| Bridges | 2, 4, 45 | Pipe (Clay) | 49 |
| Buckets (Orange Peel, Clam Shell) | 48 | Pipe (Steel and Iron) | 37, 38, 52, 53 |
| Buses | 48 | Pipe Machines (Concrete) | 48 |
| Castings | 49 | Platforms (Shop & Factory) | 43 |
| Cement | 34 | Professional Directory | 57 |
| Chain | 51, 58 | Pump Control | 36 |
| Chemists | 57 | Pumps | 36, 38, 48, 50, 60 |
| Classified Opportunities | 55 | Radio Stations | 32 |
| Clocks | 55 | Rails, Track | 54 |
| Coal | 32 | Real Estate | 54, 55 |
| Compressors (Air) | 52, 53, 54, 56 | Road and Street Material | 47, 48, 49 |
| Contractors | 47, 49, 57 | Roofing | 39 |
| Conveying | 51, 58 | Sand and Gravel | 47, 48, 49 |
| Cranes | 3, 48 | Saw Mill Machinery | 43 |
| Creosoted Materials | 45 | Screens | 49 |
| Draglines | 3, 48 | Screws and Nuts | 51 |
| Drawing Instruments | 57 | Sheets (Steel, Galvanized, etc.) | 38, 39 |
| Dredging Contractors | 47 | Ships (Welded) | 50 |
| Drills (Diamond and Shot) | 49, 57 | Shovels (Power) | 3, 48 |
| Electric Light & Power | 31 | Stationers | 55, 57 |
| Electric Machinery | 52, 53, 56 | Steel Plate Work | 4, 25, 37, 38, 45 |
| Engineers | 57 | Stone (Crushed) | 48 |
| Engines (Gas and Gasoline) | 50 | Structural Steel | 2, 4, 25, 45, 58 |
| Filters (Water) | 38 | Sugar | 7 |
| Financial | 30, 31 | Tanks and Towers (Steel & Wood) | 37, 38 |
| Flooring (Maple) | 45 | Tarpaulins | 53 |
| Flooring (Steel) | 38, 45 | Telephone Service | 23 |
| Galvanizing | 53 | Tips (Welding) | 54 |
| Gas | 31 | Trailers | 10, 48 |
| Gasoline | 41 | Transformers | 52 |
| Gears | 50 | Trucks (Motor) | 8, 10, 48 |
| Granite | 45 | Turbines (Steam) | 50 |
| Hotels | 53, 55 | Unions (Pipe) | 51 |
| Insurance | 35 | Vaults (Bank) | 33 |
| Land (Farm) | 54, 55 | Woodwork | 45 |
| Lighting, Industrial | 29 | Zinc Chloride | 59 |

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INDEX OF ADVERTISERS

A

Albert & Davidson Pipe Corp. 52
 Albert Pipe Supply Co. 52
 American Bridge Co. 2
 American Creosote Works, Inc. 45
 American Limestone Co. 48
 American Rolling Mill Co. 39
 American Sheet & Tin Plate Co. 39
 American Telephone & Telegraph Co. 23
 Appalachian Coals 32
 Arundel Corporation 47
 Associated Gas & Electric System 31
 Atlanta Tent & Awning Co. 53
 Atlantic Creosoting Co., Inc. 45
 Atlantic Gulf & Pacific Co. 47
 Austin Bros. Bridge Co. 45

B

Bacharach & Co., E. W. 38
 Baltimore Commercial Bank 30
 Belmont Iron Works 45
 Blair, Algernon 57
 Boxley & Co., W. W. 48
 Box 9244 52
 Bristol Steel & Iron Works 45
 Brooks, Benjamin T. 57
 Brown & Co. 55
 Bryant Electric Co. 57
 Buck, Sterling P. 57
 Burnette-White Lumber Co. 54
 Bylesby Engineering & Management Corp. 57

C

Carolina Steel & Iron Co. 45
 Cast Iron Pipe Research Asso. 6
 Cattie & Bros., Joseph P. 53
 Central Iron & Steel Co. 38
 Central Pipe & Supply Co. 52
 Chain Belt Co. 51
 Charleston Dry Dock & Machine Co. 50
 Chattanooga Boiler & Tank Co. 37
 Chicago Bridge & Iron Works 37
 Cincinnati Mch. & Sup. Co. 52
 Classified Opportunities 55
 Cole Mfg. Co., R. D. 37
 Converse & Co., J. B. 57
 Cook, Inc., A. D. 38
 Corbitt Co. 48
 Crucible Steel Casting Co. 49

D

Dart Mfg. Co., E. M. 51
 Davis & Son, G. M. 37
 DeLaval Steam Turbine Co. 50
 Delta Equipment Co. 52
 Dillon Supply Co. 52

E

Earle Gear & Machine Co. 50
 Electric Bond & Share Co. 30
 Electric Controller & Mfg. Co. 36
 Electric Service Co. 52
 Eppinger & Russell Co. 45
 Equipment Corp. of America 54

F

Fairbanks, Morse & Co. 60
 Farquhar Co., A. B. 43
 Fate, Root, Heath Co. 9
 Filter Sack Co. 54
 First & Merchants Natl. Bank 31
 Fiske-Carter Construction Co. 57
 Friend & Co. 49
 Froehling & Robertson 57

G

Gannett, Seelye & Fleming 57
 General Elec. Vapor Lamp Co. 29
 General Motors Truck Co. 19
 Georgia Iron Works 48
 Georgia Marble Co. 45
 Glamorgan Pipe & Fdy. Co. 49
 Grasselli Chemical Co. 59
 Greenpoint Iron & Pipe Co. 52
 Gulf Refining Co. 41

H

H & P Machinery Co. 54
 Hardaway Contracting Co. 57
 Harrington & King Perforating Co. 49
 Harris Wrecking Co. 53
 Holt Hardwood Co. 45
 Howie, Howard 54
 Hunt's Sons, M. J. 52
 Hyman-Michaels Co. 54

I

Index for Buyers 56
 International Harvester Co. 8

J

Jefferson Foundry Co. 49

K

Kaiser & Sons, L. E. 55
 Kennedy-Riegger Drilling Co. 57
 Knox Co., Earl E. 52

L

Lancaster Iron Works 38
 Lee Clay Products Co. 49
 Lee Engineering Corp., W. S. 57
 Liebmann, A. G. 38
 Link-Belt Co. 58
 Lupton, J. R. 54

M

Manhattan Perforated Metal Co. 49
 Marine Metal & Supply Co. 52
 Maryland Pipe & Steel Corp. 52
 Matthews Welding Co. 52
 McCallum Inspection Co. 57
 Milburn Co., Alex. 54
 Mitchell Mfg. Co., Robert 45
 Model Land Co. (Flagler System) 54
 Motor Repair & Mfg. Co. 52
 Mott Core Drilling Co. 57
 Mundt & Sons, Chas. 49
 Myers & Bros., F. E. 36

N

Nashville Industrial Corp. 56
 North Carolina Granite Co. 45
 Northwest Engineering Co. 3

O

O'Brien Machinery Co. 52
 Ohio Power Shovel Co. 48
 Old Dominion Box Co. 53
 Oles Envelope Corp. 55
 Owensboro Sewer Pipe Co. 49

P

Payne, N. B. 54
 Pennsylvania Drilling Co. 49
 Plymouth Loco Works 9
 Portland Cement Asso. 34

Progressive Mfg. Co. 51
 Prudential Insurance Co. 35

Q

Quinn Wire & Iron Works 48

R

Redmont Hotel 53
 Resale Dept. 52, 53, 54, 56
 Richmond Fdy. & Mfg. Co. 49
 Rives, Hunter B. 57
 Roberts Filter Mfg. Co. 38
 Robinson & Orr 54
 Rockford Power Mch. Co. 52
 Ruberoid Co. 39
 Ryerson & Son, Jos. T. 58

S

Sachsenmaier Co., George 52
 Sauermaier Bros. 48
 Sherwood, E. C. 54
 Smith & Sons, Oscar T. 57
 Snare Corp., Frederick 57
 Snad Architectural Iron Wks. 49
 Southern Hotel 55
 Southern Laboratories 57
 Sprague & Henwood, Inc. 57
 Steele & Sons, J. C. 50
 Sterling Engine Co. 50
 Sugar Institute 7

T

Table of Contents 5
 Tarr, Louis A. 54
 Tenn. Coal, Iron & R. R. Co. 25
 Thomas Pubg. Co., M. R. 38
 Truscon Steel Co. 43

U

United States Pipe & Fdy. Co. 27

V

Virginia Bridge & Iron Co. 4

W

Walker Electrical Co. 57
 WBAL 32
 Weber Co., Inc., F. 57
 Wellman Engineering Corp. 48
 Wiedeman and Singleton, Inc. 57
 Wiley & Wilson 57

Y

York Safe & Lock Co. 33

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